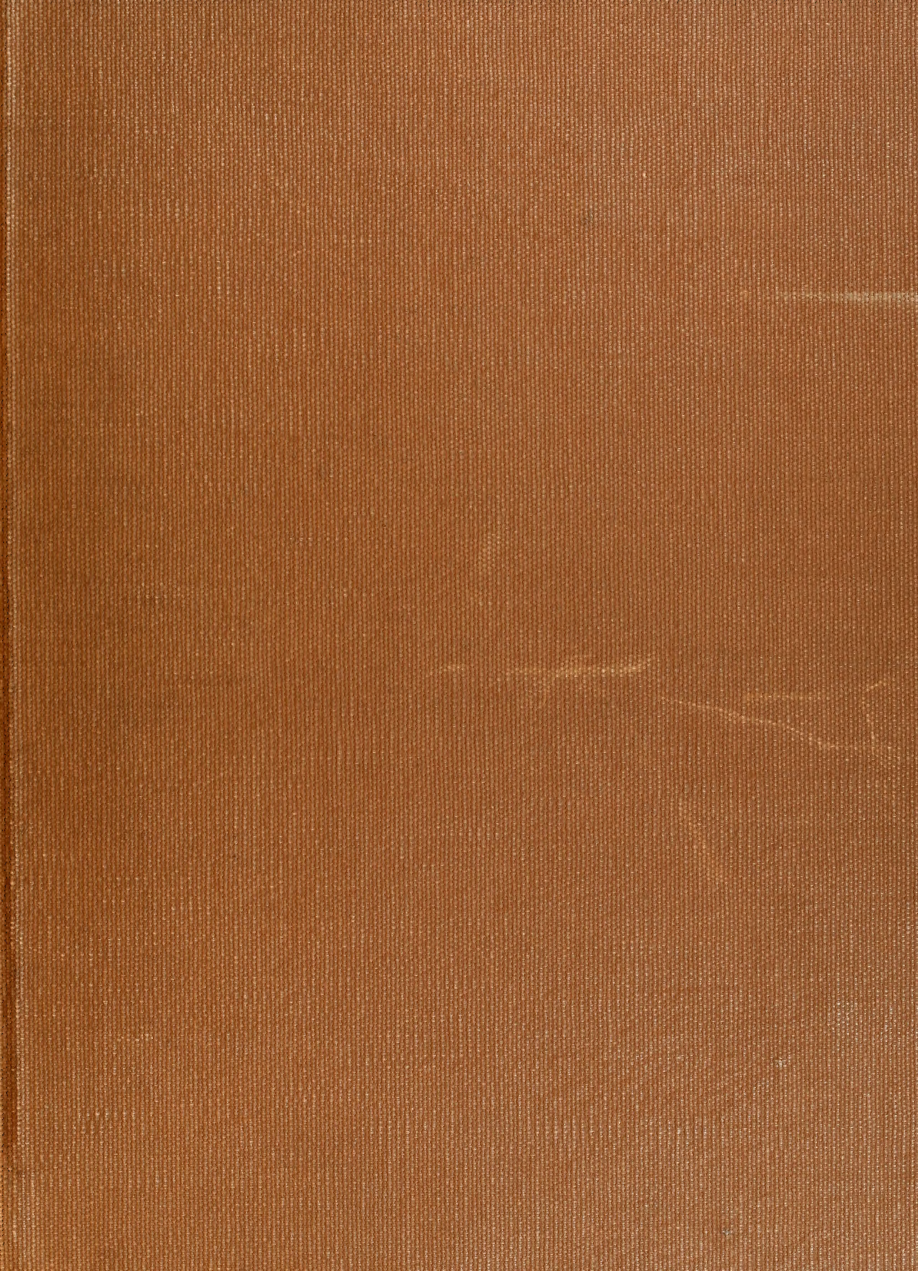
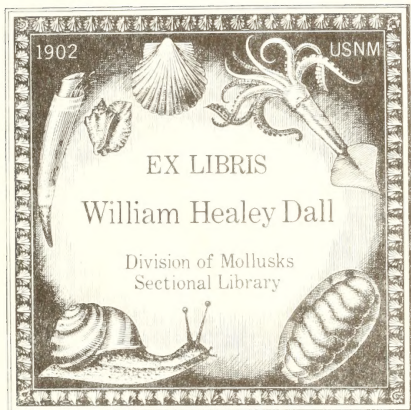






Reeve

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CONCHOLOGIA ICONICA:
OR,
ILLUSTRATIONS
OF THE
SHELLS OF MOLLUSCOUS ANIMALS.

VOL. XX.

CONTAINING MONOGRAPHS OF THE GENERA

SOLEMYA.	TEREDO.	FISTULANA.	PTEROPODA.
MYA.	PEDICULARIA.	RISSOA.	ANCYLUS.
CLAUSILIA.	MYTELIMERIA.	SILICUARIA.	ALYCÆUS.
CYLINDRELLA.	SAXICAVA.	CYRENA.	MARGARITA.
PUPA.	PUPINIDE.	SPHERIUM.	ROTELLA.
VANIKORA AND	GASTROCHÆNA.	PLANORBIS.	STYLIFER.
NERITOPSIS.	ZYLOPHAGA AND	PLANAXIS.	AURICULA.
KUPHUS.	NAVEA.	VELORITA.	

BY

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CORRESPONDING MEMBER OF THE NATURAL HISTORY SOCIETY OF WÜRTTEMBERG, OF THE LYCEUM OF NATURAL HISTORY OF
NEW YORK, OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, AND OF THE
ZOOLOGICO-BOTANICAL SOCIETY OF VIENNA.

CONTINUED BY

G. B. SOWERBY, F.L.S.

"'Twas the Creator
He sought in every volume open to him,
From the small leaf that holds an insect's web,
From which ere long a colony shall issue,
With limbs and wings as perfect as the eagle's,
To the dependent ocean, that gives birth
And nourishment to everlasting millions
Of creatures, great and small, beyond the power
Of man to comprehend, how they exist."

J. Montgomery.

LONDON:

L. REEVE & CO., 5 HENRIETTA STREET, COVENT GARDEN.

1878.

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AND PARLIAMENT STREET



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PREFACE

TO
THE TWENTIETH VOLUME.

On the completion of this great work, a few words appear due to the Subscribers.

In the British Museum, England possesses a collection of shells—including that of the late Mr. Hugh Cuming, acquired by purchase in 1865—which for richness and completeness rivals all other collections in the world put together.

The 'Conchologia Iconica' was commenced by my late husband, Mr. Lovell Reeve, in 1843, as the exponent of these and other collections. At the time of his decease, in 1865, fifteen volumes of the work had been completed. Although these, containing as they do most of the more important Genera, would have been no inconsiderable contribution to Conchological science, still as many Genera remained unrepresented, it was thought desirable to continue the work to a point at which, for all practical purposes, it might be pronounced complete.

The literary conduct of the work was therefore entrusted to Mr. G. B. Sowerby, F.L.S., who had hitherto supplied the artistic portion.

His Royal Highness the late Prince Consort was amongst the earliest subscribers, and his subscription (for two copies) has been graciously continued by Her Majesty the Queen.

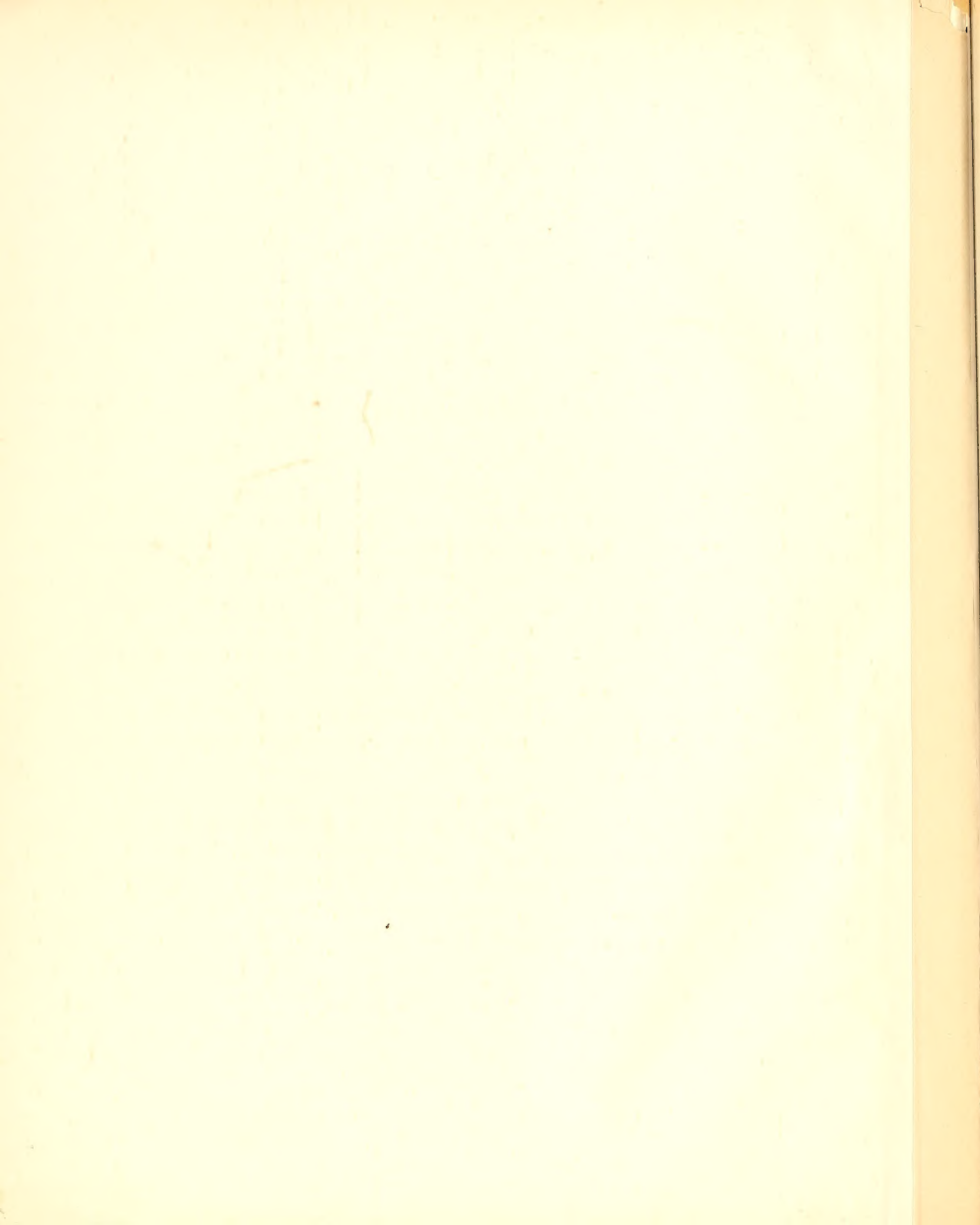
Many of the earlier subscribers have not lived to see the completion of the work, in the commencement of which they took a lively interest, but their subscriptions have been continued by members of the family, or have been replaced by other individuals.

To Her Most Gracious Majesty the Queen, and to the rest of the Subscribers, I beg to tender my most grateful acknowledgments, for the continued support which has enabled me to bring the work to what I trust will be deemed a satisfactory conclusion.

MARTHA REEVE.

THE COTTAGE, GILSTON, NEAR HARLOW:

March 29, 1878.

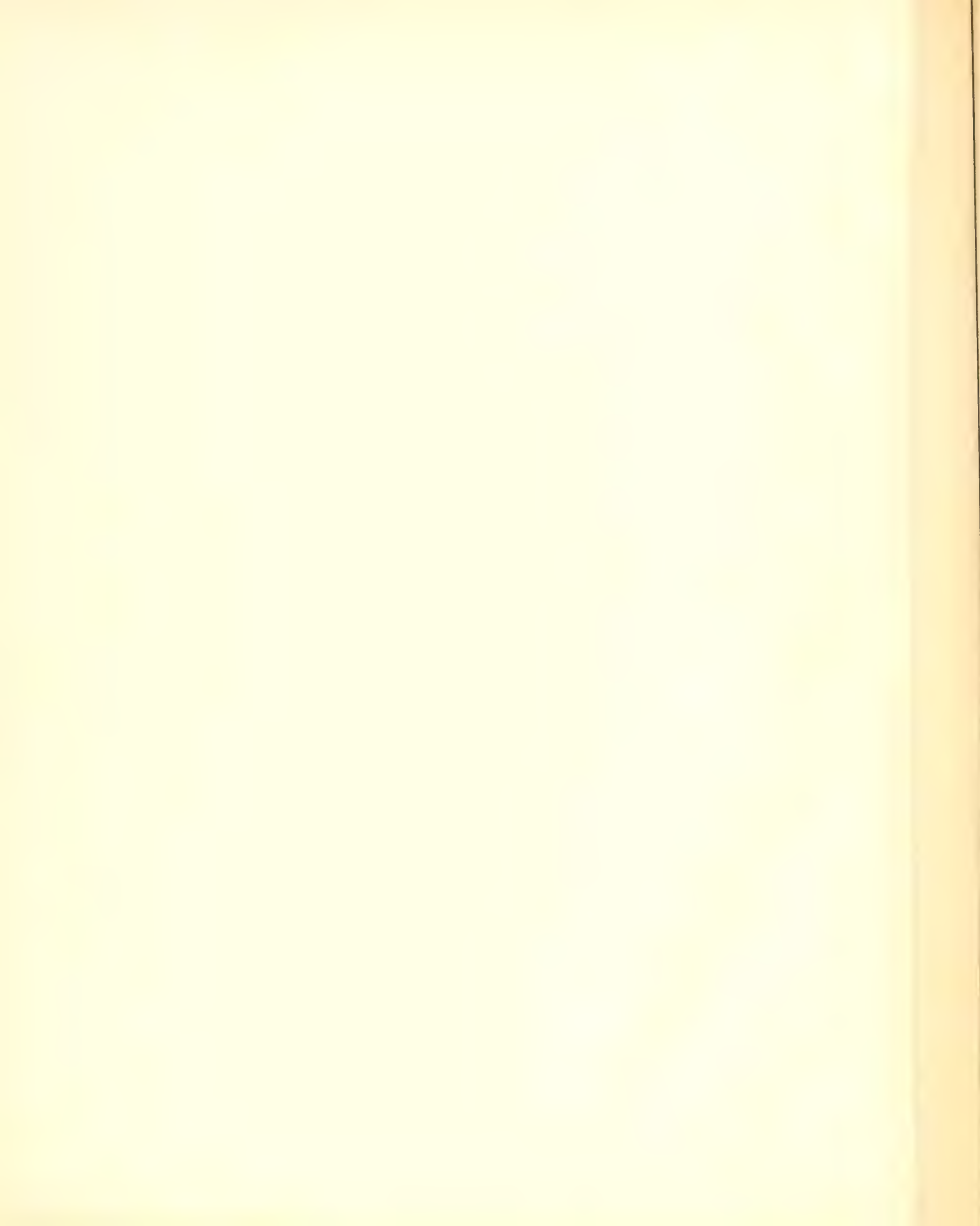


MONOGRAPH

OF THE GENUS

S O L E M Y A.

" Out of the deep th' Almighty King
Did vital beings frame. — *Watts.*





SOLEMYA.

Genus SOLEMYA, *Lamarck*.

Testa aequivalvis, inequilatralis, transversè oblonga, utrinquè obtusa, epidermide coarctata, valvula utrinquè fuso, ultra margines callosorum extensa indurata. Cardo dentatus. Ligamentum partim internum post callum trigonum instructum. Impressiones duæ remotæ, subtrigona.

Shell equivalve, inequilateral, transversely oblong, obtuse at each end, covered with a strong shiny brown horny epidermis extending beyond the edges of the valves. Hinge without teeth, ligament partly internal, inserted behind a three-cornered callus; muscular impressions two, distant, subtrigonal.

To the four or five species previously known one has recently been described and well characterized by Mr. Edgar Smith, of the British Museum—namely, the *Sol. Parkinsoni* from New Zealand, which appears to be very distinct from the comparatively well-known Australian species. The northern parts of the United States present one or two species, which, with the familiar *Solemya Mediterranea*, complete the little list. The *Solemya*, like the *Solenas* and *Myas*, are mud-burrowers, and from the construction of the foot and thinness of the shell leap with surprising activity. The shell is described as having a cardinal tooth in each valve, but the term seems quite inapplicable to the internal callus, behind which the ligament is inserted in a groove.

Species 1. (Mus. Brit.)

SOLEMYA OCCIDENTALIS. *Sol. testâ parvâ, angustâ, elongatâ; latere postico brevissimo, margine laterali obliquè truncato; latere postico attenuato, ad terminum acuminato.*

THE WESTERN SOLEMYA. Shell small, narrow, elongated; posterior side very short, lateral margin obliquely truncated; posterior side attenuated, acuminated at the end.

DESHAYES. MS. Brit. Mus.

Hab. —?

The specimens in the British Museum appear young, and the shape of the callus and ligamental insertion not sufficiently developed to determine the distinctness of the species. It is, however, a larger shell than *Solemya Mediterranea*.

Species 2. (Figs. a, b, c, Mus. Brit.)

SOLEMYA MEDITERRANEA. *Sol. testâ soleniformi, elongatâ, radiatâ; latere postico angustiusculo, brevissimo, obliquè truncato; latere antico elongato, versâs terminum ampliâculo; callo cardinali angusto, arcuato, obliquè trigono; arcuâ ligamentiferâ post callum trigonâ, infra lineatim productâ; ligamento partim etiam in sulcum obliquum linearem antè callum instructo.*

THE MEDITERRANEAN SOLEMYA. Shell soleniform, elongated, rayed; posterior side rather narrowed, very short, obliquely truncated; anterior side elongated, rather more ample towards the end; cardinal callus narrow, curved, obliquely trigonal; ligamental area behind the callus trigonal, linearly produced below; also a part of the ligament inserted in an oblique linear sulcus in front of the callus.

LAMARCK. Anim. s. Vert., ed. Deshayes, vol. vi. p. 125.

Solemya Solen, SALLI Marchiusi.

Hab. Mediterranean.

Species 3. (Mus. Brit.)

SOLEMYA BOREALIS. *Sol. testâ breviusculâ, anticè latâ, subtruncatâ, posticè latissimo, ad terminum truncato; callo cardinali trigono crasso, lato; infra bifurcato; impressione musculari anticâ elongatâ, subtrigonâ; epidermide crassa.*

THE BOREAL SOLEMYA. Shell rather short, anteriorly broad, rather truncated, posteriorly very broad, truncated at the end; cardinal callus trigonal, thick, broad; bifurcate below; anterior muscular impression elongated, subtrigonal; epidermis thick.

SOLEMYA.

TOTTEN. Siliman's Journal, vol. vi. p. 124.

Solemya celum, Say.

Hab. North America.

GRAY. MS. in Brit. Mus. Deser. E. Smith, Zool. Erebus
and Terror, p. 6.

Hab. New Zealand.

Species 4. (Mus. Brit.)

SOLEMYA PARKINSONI. *Sol. testâ latâ, breviusculâ, radiatâ subseleata, utrinque latè truncato; callo cardinali valdè obliquo, arcuato, versâ terminâ internâ attenuato; ligamento partim etiam in sulcum elongatum verticalem autè callum instructo; impressione musculari latâ.*

PARKINSON'S SOLEMYA. Shell broad, rather short, radiately slightly grooved, broadly truncated at each end; cardinal callus very oblique, curved, attenuated towards the inner termination; ligament also partly inserted in an elongated vertical sulcus in front of the callus; anterior muscular impression broad.

Species 5. (Mus. Brit.)

SOLEMYA AUSTRALIS. *Sol. testâ breviusculâ, ad terminos obtusâ, æqualiter latiusculâ; callo cardinali lato, trigono, infra attenuato; ligamento etiam partim in foramen subquadratum ante callum instructo.*

THE AUSTRALIAN SOLEMYA. Shell rather short, obtuse at the ends, equally rather broad; cardinal callus broad, trigonal, attenuated below; ligament also partly inserted in a rather square pit in front of the callus.

LAMARCK. Anim. s. Vert., Deshayes ed., vol. vi. p. 124.

Hab. Australia.

MONOGRAPH

OF THE GENUS

M Y A.

"To dive like buckets in concealed wells."—*Shakspeare*.





MYA.

PLATE I.

Genus MYA, *Linnaeus*.

Testa æquivalvis, bimusculosa, plerumque ad extremitates hians, oblonga, epidermide rugata isolato. Cardo edentulo, lamina ligamentifera trigona, cæcavata, projecta, in valva sinistra nunito. Impressio pallii plusminusve sinuata.

Shell equivalve, bimuscular, generally gaping at each end, covered with a wrinkled epidermis. Hinge toothless, furnished in the left valve with a ligament-bearing, trigonal, hollow projecting plate. Pallial impression more or less sinuated.

Genus CRYPTOMYA, *Conrad* (included).

In the more restricted genus *Mya*, typified by *M. arenaria* and *M. truncata*, the siphons are long and produced, and covered with a coriaceous epidermis in continuation of that which covers the shell; but in the *Cryptomya* there is not the same epidermis-covered projection. But the construction of the hinge and general characters of the shell, and the mud-boring habits of the animal are alike in both groups; and no useful purpose is served in keeping them apart. The *Mya* are few in number, and are principally inhabitants of Northern shores.

Species 1. (Mus. Sowerby.)

MYA ARENARIA. *Mya testis ovata, solidi, fulvæ, concentricè leviter rugatâ, utrinquè validè hianti; latere antico ventricosâ, lato, latere postico cuneatâ, subdepresso, leviter angulatâ, ad terminum suboblique truncatâ; lamina ligamentiferâ in valvâ dextrâ magnâ, productâ; impressione pallii late et quadratâ sinuatâ.*

THE SAND MYA. Shell ovate, solid, brown, concentrically lightly wrinkled, gaping strongly on each side; anterior side ventricose, broad, posterior side cuneate, subdepressed, slightly angular,

rather obliquely truncated at the end; ligament-bearing plate in the left valve large, produced, pallial impression broadly and squarely sinuated.

LINNÆUS. *Systema Naturæ.*

Hab. British Coasts.

Species 2. (Mus. Brit.)

MYA ELLIPTICA. *Mya testis tenui, ovatâ, compressâ, angustè hianti; latere antico breviusculâ; latere postico propè marginem dorsalem obliquè depressâ, angulatâ, ad terminum obliquè truncatâ; margine ventrali rectiusculâ.*

THE ELLIPTICAL MYA. Shell thin, ovate, compressed, narrowly gaping; anterior side rather short; posterior side obliquely depressed near the dorsal margin, angular, obliquely truncated at the end; ventral margin rather straight.

A. ADAMS (*Cryptomya*). MS. Mus. Brit.

Hab. — ?

More nearly equal-sided than *Mya Californica*, the anterior and not the posterior side being the shorter.

Species 3. (Fig. a, b, Mus. Brit.)

MYA CALIFORNICA. *Mya testis compressâ, angustè hianti, ovatâ, pallidè rubescenti; latere antico inflatâ, rotundâ, umbonibus subretrois; latere postico subangustato, breviusculâ, ad terminum subtruncatâ, lamina ligamentiferâ parvisculâ, sinu pallii impressionis parvâ.*

THE CALIFORNIAN MYA. Shell compressed, narrowly gaping, ovate, pale reddish; anterior side inflated, rounded, umbones leaning a little backwards; posterior side a little narrow, rather short, slightly truncated at the end; ligamentiferous plate rather small, sinus of the pallial impression small.

CONRAD — ? *Cryptomya*.

Hab. California.

MYA.—PLATE I.

Species 4. (Mus. Sowerby.)

MYA TRUNCATA. *Mya testâ oblongâ, ventricosâ, irregulariter rugatâ, posticè latè hianti; latere antico ruidè inflato, obliquè tumido, margine dorsali elevato, umbonibus angulatis, prominentibus, retrorsis, latere postico angustato; margine dorsali depresso, margine terminanti truncato.*

THE TRUNCATED MYA. Shell oblong, ventricose,

irregularly wrinkled, posteriorly broadly gaping; anterior side much inflated, obliquely tumid, dorsal margin elevated, umbones angular, prominent, leaning backwards, posterior side narrow; dorsal margin depressed, terminal margin truncated.

LINNEUS. Systema Naturæ.

Hab. Coasts of Great Britain.



M Y A.

PLATE II.

Species 5. (Fig. a, b. Mus. Brit.)

MYA PHILIPPINARUM. *Mya testâ tenui, albâ, inflatâ, inequilatrali, viz equivalvi; latere antico laevi, ventricosissimo, margine dorsali declivi, margine ventrali inflato; latere postico brevi, striato, sub-compresso, posticè cuneato, subangulato, viz truncato, margine dorsali declivi, margine ventrali sursum aedivi, umbonibus rotundis, retrorsis.*

THE PHILIPPINE MYA. Shell thin, white, inflated, inequilateral, scarcely equivalve; anterior side smooth, very ventricose, dorsal margin sloped, ventral margin much inflated; posterior side short, striated, a little compressed, posteriorly cuneate slightly angular, hardly truncated; dorsal margin sloped downwards, ventral margin sloped upwards; umbones rounded, leaning backwards.

A. ADAMS. MS. Brit. Mus.

Hab. Bay of Manila.

Belonging to the group known as *Cryptomya*, and like several other species, having one half of its surface striated; the other smooth.

Species 6. (Fig. a, b. Mus. Brit.)

MYA SEMISTRIATA. *Mya elongato-oratâ, tenui, albâ, latere antico inflato, levigato; latere postico, usque ad medium tenuiter, posticè valdè striato, ad terminum angustato, angulato, post angulum, truncato, laevi.*

THE HALF-STRIATED MYA. Shell elongated, oval, thin, white, anterior side inflated, smooth; posterior side finely striated as far as the middle, strongly behind, narrow at the end, angular, truncated behind the angle, smooth.

HANLEY. Proc. Zool. Soc. 1850, p. 80.

Hab. — ?

One of the *Cryptomya* group described by Mr. Hanley from a single valve in the collection of the late Mr. Cumming.

Species 7. (Mus. Brit.)

MYA PEREIRA. *Mya testâ oblongo-subquadratâ, brevî, albâ, concentricè irregulariter rugatâ, anticè inflatâ, latâ; posticè subangustatâ; latere postico brevi, latè truncato, hiantî, margine elevato.*

THE SHORTENED MYA. Shell oblong-subquadrate, short, elevated, concentrically irregularly wrinkled, inflated in front, broad; posteriorly rather angular; posterior side short, broadly truncated, gaping, margin raised.

GOULD. United States Exploring Expedition.

Hab. Sitela.

Although this shell is broader and shorter than the British *Mya truncata* is generally found, its distinctness from that species is matter of some doubt.

Species 8. (Fig. a, b. Mus. Sowerby.)

MYA CANCELLATA. *Mya testâ elongatâ, crassiusculâ, albâ rugis concentricis numerosis, minutè undulatis, et striis radiantibus decussatâ; latere postico brevi, cuneato, ad terminum, truncato, circulariter hiant; latere postico inflato, obliquè producto, ad terminum rotundato.*

THE CANCELLED MYA. Shell elongated, rather thick, whitish; decussated with numerous minutely undulated concentric wrinkles and radiating striæ, posterior side short, cuneate, truncated and roundly gaping at the end; posterior side inflated, obliquely produced, rounded at the end.

CONRAD. Annals of Natural Science of the Academy of Philadelphia.

Hab. California.

April, 1875.





MYA.

PLATE III.

Species 9. (Fig. a, b.)

MYA MINDORENSIS. *Mya testâ compressâ, albâ, latâ, levigatâ, ovatâ; latere antico subinflato, rotundato, umbonibus parvis, submedianis; latere postico angustiusculo, propè marginem dorsalem angulato, post angulum compresso, ad terminum latè truncato, margine dorsali brevi, depresso.*

THE MINDORO MYA. Shell compressed, white, broad, smooth, ovate; anterior side rather inflated, rounded, umbos small, nearly central; posterior side rather narrow, angular near the dorsal margin, compressed behind the angle, broadly truncated at the end, dorsal margin short, depressed.

ADAMS AND REEVE — ? MS. Mus. Cum. in Brit. Mus.
Hab. Isl. Mindoro.

A small shell of the *Cryptomya* group, differing from *Mya Californica* chiefly in the broad posterior truncation.

Species 10. (Mus. Brit.)

MYA DIVERGENTIA. *Mya testâ brevi, posticè latissimè hiantî, subquadrata, albâ, tenuissimè striatâ; latere antico semicircolato; umbonibus elevatis, subacuminatis; latere postico acutè angulato, perpendiculariter truncato, antè angulum undulatum rugato, divergentim striato.*

THE DIVERGENT MYA. Shell short, with a wide posterior hiatus, rather square, white, very finely striated; anterior side half-round; umbos elevated, rather acuminate; posterior side acutely angular, perpendicularly truncated, with wavy wrinkles and divergent striae in front of the angle.

A. ADAMS (*Cryptomya*). MS. Cum. Coll. in Brit. Mus.
Hab. Ceylon.

Species 11. (Mus. Brit.)

MYA DECURTATA. *Mya testâ ovatâ, albâ, levigatâ, anticè subrotundâ; margine ventrali convexo; latere*

postico acutè arcuatim angulato, angustato, perpendiculariter truncato; margine dorsali depresso, rectiusculo, complanato.

THE SHORTENED MYA. Shell ovate, white, smooth, anteriorly rounded; ventral margin convex; posterior side with an acute curved angle, narrow, perpendicularly truncated; dorsal margin depressed, rather straight, flattened.

A. ADAMS — ? MS. (*Cryptomya*), Cum. Coll. in Brit. Mus.

Hab. Isl. Luzon, Philippines.

Species 12. (Fig. a, b, Mus. Sowerby.)

MYA ACUTA. *Mya testâ ovatâ, tenuiusculâ, pallidè fulcâ, concentricè leviter rugatâ, utrinquè latè hiantî; latere antico ventricosò, lato; latere postico cuneato, compresso subrostrato, subacuminato; impressione palli acutè sinuata.*

THE ACUTE MYA. Shell ovate, rather thin, pale fulvous, concentrically lightly wrinkled, widely gaping at each end; anterior side ventricose, broad; posterior side cuneate, compressed, rather rostrated, rather acuminate; impression of the mantle roundly sinuated.

SAY. Wood's General Conchology.

Mya Japonica, Say (var.) MS. Mus. Sowerby.

Hab. North America; Chupoo, Japan.

The two specimens figured, the smaller Japanese, the larger North American, resemble each other and differ in the same degree from our common *Mya arenaria*. They are much more pointed at the end, and have a more rounded sinus in the pallial impression. These differences, however, may be rather varietal than specific.

MYA.—PLATE III.

Species 13. (Mus. Brit.)

MYA PRINCEPS. *Mya testâ albâ, tenui, ovatâ, ventricosâ; antè median, medio et posticè radiatim striatâ; latere antico inflato, oblongo anticè levigato, semi-ovato; umbonibus inflatis, retrorsis; latere postico brevi, angusto, obliquè angulato, antè angulum coarctato, ad terminum truncato; margine dorsali depresso, declivi.*

THE PRINCE MYA. Shell white, thin, ovate, ventricose;

radiately striated from before the middle, and posteriorly; anterior side inflated, oblong, smooth anteriorly, semiovate; umbones inflated, recurved; posterior side short, narrow, obliquely angular; narrowed in front of the angle, truncated at the end; dorsal margin depressed, sloped.

A. ADAMS. Ind. (*Cryptomya*) MS. Cum. Coll.

Hab. Philippine Islands.

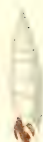
The largest and finest of the *Cryptomya* group.

MONOGRAPH
OF THE GENUS
CLAUSILIA.

Nature, great parent!

How mighty, how majestic are thy works!—*Thomson.*





CLAUSILIA.

PLATE I.

Genus CLAUSILIA. *Desparmand.*

Testa terrestris, plerumque subrotunda, turrita, fusiformis, apertura plus minusve auriformi, intus lamina liberâ subspirali testacea clausa, columella plerumque bicipitata.

Shell terrestrial, generally sinistral, turreted, fusiform, aperture more or less auriform, closed within by a free subspirally shelly plate, columella generally with two plaits.

The *Clausium*, shown at fig. 7, can only be seen *in situ*, by breaking the last whorl of the shell. It is of a subspirally form and turns on the edge of the inner part of the columella by means of a cartilaginous hinge. The animal can thereby retreat further within his shell and shut himself up more securely than by means of the ordinary external operculum of other shells. The species of this interesting genus of land shells are found everywhere in Europe, in China, and Chinese and Indian Islands, and generally in temperate districts. We have not been able to identify, among our 165 species taken principally from the British Museum and our own collections, half of the species enumerated by Pfeiffer, whose long and laborious studies, almost entirely confined to the air-breathing molluscs, have enabled him to present so complete a list. Our enumerations, however, include the great bulk of the species likely to be met with, and most of the more interesting and striking forms.

Species 1. (Mus. Sowerby.)

CLAUSILIA TRIDENS. Cl. testâ papiformi, medio subinfuso, fusca, profundè perpendiculariter sulcata; anfractibus senis permanentibus, altis, ultimo elongato, angustato, infra prolongato, profundè rimato, subrotundo; apertura magna, latâ, subquadrate, superne eleata, acuminato; margine albo, crasso, epresso; plicâ parietali crassâ, plicâ columellari parvâ, elevatâ, plicâ subcolumellari inconspicuâ.

THE THREE-TOOTHED CLAUSILIA. Shell papa-shaped, a little inflated below, brown, deeply perpendicularly grooved; whorls six permanent, high, last elongated, narrow, prolonged below, deeply

notched, a little tortuous; aperture large, broad, rather square, raised above, acuminate; margin white, thick, expanded; parietal plait thick, columellar plait small, raised, under-columellar plait inconspicuous.

CHEMNITZ (Turbo). Pfl. Mon. Hcl. II. 396.

Turbo costulatus. Wood.

Clausilia labiata. Sowerby.

Hab. Porto Rico.

Species 2. (Mus. Brit.)

CLAUSILIA BARTLETTI. Cl. testâ subrotundâ, brevissimâ, ventricosissimâ, solidâ, levi; anfractibus quinâ, tribus maximis, inflatis, ultimo angustato, prolongato; apertura subauriformi, labio externo supra medium sinuato; plicâ parietali magnâ, plicâ columellari subtriangulâ.

BARTLETT'S CLAUSILIA. Shell somewhat pink, very short, very ventricose, solid, smooth; whorls five, three very large, inflated, last narrowed, prolonged; aperture subauriform, outer lip sinuous above the middle; parietal plait large, columellar plait subtriangular.

A. ADAMS. Proc. Zool. Soc. 1866.

Hab. Eastern Peru.

Species 3. (Mus. Brit.)

CLAUSILIA BIPICATA. Cl. testâ fusiformi, ventricosâ, pruinosa, tenuissimè striatâ; anfractibus novenis, inflatis; apertura oblongâ; margine albo, labio interno bicipitato.

THE TWO-PLAIED CLAUSILIA. Shell fusiform, ventricose, plum-coloured, very finely striated; whorls nine, inflated; aperture oblong; margin white, inner lip two-plaited.

MONTAGNI. Brit. Biv.

Helix percreta. Mull.

Clausilia Montagni. Gray.

Hab. Germany, Spain, Great Britain.

Species 4. (Fig. a, b, Mus. Sowerby.)

CLAUSILIA FORMOSENSIS. Cl. testâ fusiformi, ventricosâ, solidâ, fuscâ, vel pruinosa; anfractibus un-

decenis, usque ad medium et infra gradatim crescentibus, ultimo rinato; aperturâ subauriformi, margine crasso, albo, labio interno triplicato.

- THE FORMOSA CLAUSILIA. Shell fusiform, ventricose, solid, fulvous or plum-coloured; whorls eleven, gradually increasing to the middle and below, last notched; aperture somewhat ear-shaped; margin thick, white; inner lip with three plaits.
- H. ADAMS. Proc. Zool. Soc. 1866, p. 317, t. 33, f. 7.
- Hab. Island of Formosa.

Species 5. (Mus. Brit.)

CLAUSILIA PHLEBUSE. *Cla. testâ altâ, subcylindricâ, flavidâ, levigatâ, ad suturam rubro-lineatâ; anfractibus novenis, gradatim crescentibus, altis, obliquis, convexis, ultimo altissimo, longè rinato; aperturâ elongato-auriformi, intus nigro marginatâ, plicâ parietali magnâ.*

- THE PHLEBUSA CLAUSILIA. Shell high, subcylindrical, yellow, smooth, with a red line at the suture; whorls nine, gradually increased, high, oblique, convex, last very high, with a long notch; aperture elongated, ear-shaped, black-edged within, parietal plait large.

A. ADAMS. Proc. Zool. 1872.

Hab. China.

Species 6. (Mus. Brit.)

CLAUSILIA TAYLORI. *Cla. testâ dextrâ, albidâ, pyramidalâ, medio paulò inflatâ, rugosè tiratâ; anfractibus duodecenis, medio et suprâ gradatim attenuatis, ultimo altissimo, infra medium carinato, descendenti, subattenuatâ, profunde rinato, sublazato; aperturâ deltoideâ, magnâ, vix plicatâ, margine utrinque latè expanso.*

- TAYLOR'S CLAUSILIA. Shell dextral, whitish, pyramidal, a little swelled in the middle, roughly ridged; whorls eleven, gradually attenuated from the middle upwards, last very high, keeled below the middle, descending, slightly attenuated, deeply notched, slightly uncoiled; aperture deltoid, large, scarcely plaited, margin widely expanded on each side.

PFIFFER. Proc. Zool. Soc. 1861, p. 27, Pl. II.

Hab. —? ?

A shell of remarkable beauty and singularity of form.

Fig. 7. Species 142. (Mus. Brit.)

CLAUSILIA MACASCARIENSIS. I had figured the species on Plate XV. as *Clausilia Macarana*, not knowing that the latter name was only synonymous with the former. The later figures and description were taken from a specimen in which the back of the last whorl is more strongly and roughly plaited than usual. In the figure on this Plate we have shown a last whorl with the *clausium in situ*.

Species 8. (Mus. —? ?)

CLAUSILIA EXILIS. *Cla. testâ brevi, solidâ, fusiformi, pruinatâ, medio et infra ventricosâ, latâ; anfractibus novenis, levibus, inflatis, brevâ fuscâ ad suturam marginatis, ultimo leviter rinato, infra angustato; aperturâ perpendiculariter oblongâ, magnâ; margine albo, crasso, labio externo supra medium sinuato, tumido, plicâ parietali prominenti, plicâ columellari crassâ, magnâ.*

- THE NARROW CLAUSILIA. Shell short, solid, fusiform, plum-coloured, ventricose in the middle and below, broad; whorls nine, smooth, inflated, bordered with a narrow band at the suture; last slightly notched, narrowed below; aperture perpendicularly oblong, large; margin white, thick, outer lip sinuous above the margin, tumid, parietal plait prominent, columellar plate thick, large.

ADAMS. Proc. Zool. Soc. 1866.

Hab. Isle Formosa.

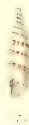
Species 9. (Mus. —? ?)

CLAUSILIA OBLITA. *Sowerby.*

THE FORGOTTEN CLAUSILIA.

An error has arisen from the first plate remaining undescribed long after its publication. The writer having mislaid his memoranda cannot now identify this shell, but names it provisionally as above.





CLAUSILIA.

PLATE II.

Species 10. (Mus. —? Copied.)

CLAUSILIA TORTICOLLIS. *Cla. testâ brevi, fusâ, brevissimè cylindricâ; anfractibus striatis, rectis, ultimo elevato, rimato, soluto; aperturâ subquadratâ, margine interno supiori, infiori, et medio plicatâ.*

THE WRY-NECKED CLAUSILIA. Shell short, brown, very shortly cylindrical; whorls few, striated, straight, the last raised, notched, uncoiled; aperture rather square, with the inner margin plaited above, in the middle and below.

OLIVIER. Sowerby's GENEA.

Hab. Syria.

Species 11. (Mus. Sowerby.)

CLAUSILIA ANATOLICA. *Cla. testâ sinistrali, fusiformi, pallidè griseo-fusâ, medio et infiori inflatâ, superius gradatim attenuatâ; anfractibus concavâscentis, obliquis, densè laminatis costatis; ultimo contracto, rimato, propè aperturam oblique birostrato; aperturâ magnâ, subquadratâ, margine expanso, tenui, labio externo intus plicato, margine superiori perpendiculariter uniplicatâ; plicâ columellari elevatâ, obliquâ.*

THE ANATOL. CLAUSILIA. Shell sinistral, fusiform, pale greyish-brown, inflated in the middle and below oblique, with close, laminar ribs; last contracted, notched, with two oblique ridges near the mouth; aperture large, rather square, margin expanded, thin, outer lip with an inner plait, upper margin with a single perpendicular plait; columellar fold raised, oblique.

ROTH. Kuster, p. 233.

Hab. Anatol.

Species 12. (Mus. Sowerby.)

CLAUSILIA ELEGANS. *Cla. testâ subfusiformi, purpurco-fusâ; costis albis, tenuibus, crebris sequentibus sculptâ; anfractibus 9, concavâscentis, ultimo post aperturam contracto et plicato; aperturâ albidâ, subauriformi, margine expanso, recto,*

labio externo superius incrassato, margine superiori perpendiculariter uniplicato, plicâ columellari latâ, obliquâ.

THE ELEGANT CLAUSILIA. Shell rather fusiform, purple-brown, sculptured with white, narrow numerous consecutive ribs; whorls nine, rather convex, the last contractal and plaited beyond the aperture; aperture whitish, somewhat auriform, margin expanded, reflected outer lip thickened above, upper margin with a single perpendicular plait, columellar plait broad, oblique.

BIELZ. ROSSII. Icon. iii. p. 64.

Clausilia intercedens, A. Schmidt.

Hab. Wallachia.

Species 13. (Mus. Sowerby.)

CLAUSILIA LAMINATA. *Cla. testâ lavigatâ, fusiformi, fusco-cornâ, obliquè sinistrali; anfractibus concavâscentis; aperturâ subauriformi, infiori intus plicatâ; plicâ superiori obliquâ, breviusculâ; plicâ columellari obliquâ, latè laminatâ; margine aperturæ angustâ, albo.*

THE LAMINATED CLAUSILIA. Shell smooth, fusiform, horny-brown, obliquely sinistral; whorls rather convex; aperture somewhat auriform, plaited within at the lower part; superior plait oblique, rather short; columellar plait oblique, broadly laminar; edge of aperture narrow, white.

MONTAGU. British Shells.

Helix bidens, Muller.

Clausilia lanellata, Leach.

Clausilia derangata, Jeffreys.

Clausilia lucida, Menke.

Clausilia granatina, Zeigler.

Clausilia Transylvanica, Stenz.

Hab. Great Britain, and Europe generally.

Species 14. (Mus. Sowerby.)

CLAUSILIA EXARATA. *Cla. testâ gracili fusiformi, griseo-creta, laniis tenuibus crebris sculptâ; anfractu*

ultimo elongato, contracto, propè aperturam oblique birugato, concavo; aperturâ parvâ, subauriformi, fuscâ, infra intus plicatâ, margine expanso, plicâ superiori parvâ, plicâ columellari elevatâ, arcuatâ.

THE FLOUGHED CLAUSILIA. Shell slenderly fusiform, greyish, sculptured with thin, close laminae; last whorl elongated, contracted, with two oblique wrinkles near the aperture, concave; aperture small, rather auriform, brown, with an inner plait below, margin expanded; upper plait small; columellar plait raised, arched.

ZEIGLER. Pfeiffer Monog. ii. 449.

Clausilia callosa, Montford.

Clausilia denegabalis, Zeigler.

Hab. Dalmatia.

Species 15. (Mus. Sowerby.)

CLAUSILIA LEVISSIMA. *Cla. fusiformi, cornâ, levigatâ, sinistrali; anfractibus cix concavis, elevatis, ultimo compresso propè aperturam arcuatim rimato; aperturâ magnâ, bicipitatâ, margine albo, reflexo, tenui.*

THE VERY SMOOTH CLAUSILIA. Shell fusiform, horny, smooth, sinistral; whorls scarcely convex, elevated, last compressed, with a curved notch close to the aperture; aperture large, with two folds, margin white, reflected, thin.

ZEIGLER. Pfeiffer Monog. ii. p. 439.

Clausilia glabrata, Mühlfeldt.

Clausilia levigata, Mühlfeldt.

Clausilia decorata, Zeigler.

Clausilia superstructa, Parreyss.

Clausilia fulginea, Parreyss.

Hab. Croatia and Dalmatia.

Species 16. (Mus. — ? Copied.)

CLAUSILIA MOUTONII. *Cla. testâ fusiformi, ventricosâ, tenui, tenuiter striatâ griseo-fuscâ, maculis albis fuscisque propè suturam notatâ, maculis albis medio anfractuâ aspersâ; anfractibus apicalibus rotundis, medianis inflatis, penultimo elongato, medio contracto, ultimo infra rimato; aperturâ magnâ, auriformi, plicâ superiori parvâ, albâ, columellâ bicipitatâ, aperturâ margine reflexo, subexpanso.*

MOUTON'S CLAUSILIA. Shell fusiform, ventricose, thin, finely striated, grey-brown, marked with white

and brown spots near the suture, sprinkled with white spots in the middle of the whorls; apical whorls rounded, middle ones inflated, the last but one elongated; the last notched; aperture large, auriform, upper plait small, white, columella with two plaits, margin of the aperture reflected, slightly expanded.

PEIFFER. Proc. Zool. Soc., 1875, p. 275, Pl. 36.

Hab. Loa Mountains, Camboja.

Species 17. (Figs. a, b, Mus. Sowerby and Brit.)

CLAUSILIA LUCOSTIGMA. *Cal. testâ fusiformi, angustâ, fuscâ, vel pallidâ cornâ, medio subinflato; anfractibus 9, elevatis, liris, ad suturam lineâ rubrâ maculis albis interruptis ornatis; ultimo rimato, contracto; aperturâ albâ, subauriformi, intus contracto, plicâ columellari latâ, margine superiori perpendiculariter uniplicato.*

THE WHITE-MARKED CLAUSILIA. Shell fusiform, narrow, brown, or pale horn, a little inflated in the middle; whorls nine, raised, ridged, with a red line at the suture, interrupted by white spots; the last notched, contracted; aperture white, somewhat auriform, contracted within, columella plait broad, upper margin with a single perpendicular plait.

ZEIGLER. Pfeiffer Monog. ii. p. 446.

Clausilia caudilabris, Porro.

Clausilia opalina, Zeigler.

Clausilia latilabris, Mühlfeldt.

Hab. Italy.

Species 18. (Mus. Sowerby.)

CLAUSILIA CYLINDRICA. *Cla. brevicaudâ, subcylindricâ, cornâ, tenuiter liris; anfractibus altis, rectisculis, aperturâ perpendiculariter oblongâ, margine angustâ, rotundâ, albo, supernè uniplicato, plicâ columellari obliquâ, angustâ, elevatâ.*

THE CYLINDRICAL CLAUSILIA. Shell rather short, rather cylindrical, horny, finely ridged; whorls elevated, rather straight, aperture perpendicularly oblong, margin narrow, rounded, white, plaited above, columellar plait oblique, narrow, raised.

GRAY. MS. Pfeiffer Monog. iii. p. 591.

Hab. Himalaya Mountains.



CLAUSILIA.

PLATE III.

Species 19. (Mus. Sowerby.)

CLAUSILIA FALLAX. *Cla. testâ subventricosa, fusiformi, liris lamelliformibus rugatâ, pallide fuscâ; aperturâ subquadratâ, superne multiplicatâ, marginâ externo superne contracto, labio columellari bitaloso, plicâ columellari rectilineâ, infusâ truncatâ.*

THE FALLACIOUS CLAUSILIA. Shell rather ventricose, fusiform, wrinkled with lamelliform ridges, pale fulvous; aperture rather square, single-plaited above, outer margin contracted above, columellar lip with two callosities, columellar plait rather straight, truncated below.

ROSSMÄSLER — ? Pfeiffer, Monog. ii. p. 127.

Clausilia obscura, Parreys.

Clausilia decipiens, Zeigl.

Hab. Transylvania.

Species 20. (Mus. Sowerby.)

CLAUSILIA DISCOIDE. *Cla. testâ breviterbenti, laevi, laccigatâ, medio ventricosa, versus apicem angustatâ, cornuâ, flammis fuscascintillis variegatâ, anfractibus 10, convexiusculis, tribus apicalibus angustissimis; aperturâ latâ, plicâ superiori parvâ, inferiori super columellam obliquè elongatâ.*

THE TWO-COLOURED CLAUSILIA. Shell rather short, stout, smooth, ventricose in the middle, narrow towards the apex, horny, varied with brownish flames, whorls 10, rather convex, three apical very narrow; upper plait small, lower obliquely elongated upon the columella.

PEIFFER, Monographia, ii. p. 416.

Hab. Isl. Corigo.

Species 21. (Mus. Sowerby.)

CLAUSILIA FERVULA. *Cla. parvâ, tenui, fusiformi, laevi, purpureo-fuscâ; anfractibus altis, ultimo arcuato rimatâ; aperturâ subauriformi, intus infusâ biplicatâ, margine tenui, rotundo albo, margine superiori multiplicatâ, plicâ columellari elevato, perobliquâ, infusâ truncatâ.*

THE LITTLE CLAUSILIA. Shell small, thin, fusiform, smooth, purple-brown; whorls elevated, the last with a curved notch; aperture rather auriform, with two folds within at the lower part, margin thin, round, white, upper margin with one fold, columellar fold raised, very oblique, truncated below.

SEIDEE — ? Pfeiffer, Mon. ii. p. 462.

Clausilia minima, Parreys.

Hab. Germany and other parts of Europe.

Species 22. (Mus. Brit.)

CLAUSILIA CYLINDRIFORMIS. *Cla. testâ fusiformi, pallidissime lilacâ, longè rimatâ, leviter liratâ; anfractibus apicalibus fuscis, medianis subinflatis; ultimo contracto, elongato, longè subito, ad dorsum rugis duabus obliquis, elevatis, elongatis quasi bicarinatâ; aperturâ remotâ, subovatâ, plicâ superiori tenui, plicâ columellari elevatâ, tenui, margine expansa, tenui.*

THE CYLINDRIFORM CLAUSILIA. Shell fusiform, very pale lilac, with a long notch, slightly ridged; apical whorls brown, middle whorls a little inflated, the last contracted, elongated, with a long portion uncoiled, as it were double-keeled at the back with two oblique elevated wrinkles; aperture distant, rather oval, upper plait thin, columellar plait raised, thin, margin expanded, thin.

BOURBIGNAT — ? Pfeiffer, Mon. Hel. iv. p. 720.

Hab. Mount Lebanon, Syria.

Species 23. (Mus. Sowerby.)

CLAUSILIA BIELZI. *Cla. testâ dextrorsâ, ventricoso-fusiformi, tenui, cornuâ, irregulariter et pterunquâ distanter liratâ; anfractibus convexis, medianis inflatis, elevatis, ultimo elongato, propè aperturam rimatâ; aperturâ perpendiculariter oblongâ, margine externo rotundo, laevi; plicis internis duabus, tenuibus, plicâ marginali superiori parvâ; plicâ columellari tenui, angulatâ.*

BIELZI'S CLAUSILIA. Shell dextral, ventricose-fusiform, thin, horny, irregularly and for the most part distantly ridged; whorls convex, the middle ones inflated, raised, the last elongated, notched near the aperture; aperture perpendicularly oblong, outer margin rounded, smooth; internal plaits two, thin, upper marginal plait small, columellar plait thin, angular.

PARREYS, Pfeiffer Monog. iii. p. 588.

Clausilia tenuis, Parreys.

Clausilia clathrata, Rossmisler.

Hab. Transylvania.

CLAUSILIA.—PLATE III.

Species 24. (Mus. Brit.)

CLAUSILIA ROLPHII. *Cla. testâ obtusè fusiformi, cornu fuscâ liris crebris sculptâ; anfractibus medianis ventricosis, ultimo elevato, infra contracto, rimato in varicem spiralem ad dorsum desinentè; aperturâ subauriformi, margine externo superne contracto, labio columellari plicato, plicis, una superiori, parvâ, duobus parvis submarginalibus, unâ magnâ laminatâ, obliquè subintenui.*

ROLPH'S CLAUSILIA. Shell obtusely fusiform, horn-brown, sculptured with close ridges; middle whorls ventricose, the last raised, contracted below, notched, ending in a spiral varix at the back; aperture rather auriform, outer margin contracted above; columellar lip plaited, plaits, one above small, two small near the margin, one large, laminated, oblique, partly internal.

LEACH —? Pfeiffer Monog. iv. p. 762.

Clausilia Mortilleti, Dumont.

Clausilia biplicata, Parreys.

Clausilia satelles, A. Schundl.

Hab. Britain, France, &c.

Species 25. (Mus. Brit.?)

CLAUSILIA SWINHOE. *Cla. testâ arcuato-rimata, fusiformi, solidâ, subcentricosâ, castaneâ, striatâ; anfractibus 10–12, convexiusculis, ultimo infra turgide; aperturâ verticali, oblongâ ovali, angulo superiori rotundato; lamellis validis, unâ superiori, duobus columellaribus obliquis, haud elevatis.*

SWINHOE'S CLAUSILIA. Shell with a curved notch, fusiform, solid, rather ventricose, chestnut striated; whorls ten to twelve convex, the last turgid at the lower part; aperture vertical, oblong, oval, rounded at the upper angle, lamellæ strong, one upper, two oblique columellar, not raised.

PFEIFFER. Proceedings of the Zoological Society, 1865, p. 830, plate 46, f. 11.

Hab. Isl. of Formosa.

Species 26. (Mus. Sowerby.)

CLAUSILIA CRISPA. *Cla. testâ brevi, ventricosâ fumoso-fuscâ, anfractibus 8, maculis magnis albis castaneisque superne propè suturam variegatis, convezis, tenuiter et dense liris, ultimo propè aperturam rimato, infra ad dorsum subspiraliter birugato; aperturâ albâ, disjunctâ, intus contractâ, margine lato, laminatâ expanso, plicâ superiori perpendiculari, plicâ columellari elevatâ.*

THE CRISP CLAUSILIA. Shell short, ventricose, smoky-brown, whorls eight, variegated above near the suture with large white and chestnut spots, convex, finely and closely ridged, the last notched near the aperture, with two subspiral wrinkles below on the back; aperture white, disjoined, contracted within, margin broad, spread in a layer, upper plait perpendicular, columellar plait elevated.

LOWE. Dr. Paiva, Monog. Moll. Madeira.

Hab. Madeira.

Species 27. (Mus. Sowerby.)

CLAUSILIA GASTROLEPTA. *Cla. testâ breviusculâ, castaneâ ad suturam albido variegatâ, tenuissimè liris, anfractibus 9, medianis ventricosis, ultimo attenuato, rimato, compresso, infra birugato; aperturâ albâ, margine lato, latere externo supri medium sinuatim incrassato, plicâ superiori elongatiüsculo, plicâ columellari lato, horizontali.*

THE SMALL-CHESTED CLAUSILIA. Shell rather short, chestnut, varied with white at the suture, very finely ridged, whorls nine, the middle ones ventricose, the last attenuated, notched, compressed, with two wrinkles beneath; aperture white, margin broad, outer side sinuously thickened above the middle, upper fold rather lengthened, columellar fold broad, horizontal.

ZEHLER —? Pfeiffer Monog. ii. p. 448.

Clausilia Freyeri, Küster.

Clausilia tabula, Küster.

Clausilia elongata, Cautraine.

Clausilia imbecilis, Parreys.

Hab. Dalmatia.

Species 28. (Mus. Sowerby.)

CLAUSILIA DELTOSTOMA. *Cla. testâ parvâ, angustâ, fuscâ, dense albiliris; anfractibus 10, convexiusculis; ultimo rimato, obliquè attenuato, infra birugato; aperturâ subdeltoideâ, biplicato, parviusculo, subdisjuncto.*

THE DELTA-MOUTHED CLAUSILIA. Shell small, narrow, brown, with close, white ridges; whorls ten, rather convex; the last notched, obliquely attenuated, with two wrinkles below; aperture somewhat deltoid, with two plaits, rather small, a little disunited.

LOWE —? Pfeiffer Mon. ii. p. 411.

Hab. Porto Santo, Madeira.



CLAUSILIA.

PLATE IV.

Species 29. (Mus. Sowerby.)

CLAUSILIA CONSPERSA. *Cl. testā levigatā, cornuā, breviusculā, medio ventricosā, ad suturam tuberculis minutis albis creatā; anfractibus 10, ultimis minoribus, ad dorsum albo notato, infra subcirculari; aperturā magnā, plati columellari latā, subhorizontali; margine tenui, albo, levigato.*

THE SPINKLED CLAUSILIA. Shell smooth, horny, rather short, ventricose in the middle, crested with minute white tubercles at the suture; whorls ten, the last notched, marked with white at the back, slightly varicose below; aperture large, columellar plait broad, nearly horizontal; margin thin, white, smooth.

PARREYSS. Rossmaisl. Icon. iii.

Hab. Bosnia. Corfu. Dalmatia.

Species 30. (Mus. Brit.)

CLAUSILIA Plicata. *Cl. testā elongatā, fusiformi, rubro-fusci, tenuiter lineatā, ad suturam plicis valde albis ornatā; aperturā oblongā, bicipitatā, infra subacuminatā, margine tenuiter reflexo; ultimo anfractu rimato, infra elongato, tumido.*

THE PLATED CLAUSILIA. Shell elongated, fusiform, red-brown, finely ridged, ornamented at the sutures with strong white plaits; aperture oblong, with two plaits, somewhat acuminate below, margin thinly reflected; last whorl notched, elongated, tumid below.

DEAPENAUD (Pupa). Conch. fluv. Pfeiffer Monog. ii. p. 479.

Clausilia marina, C. grossa, C. elongata, C. pulchra, Parreyss.

Clausilia rustica, Zeigler.

Helix muratis, Stüder.

H. plicosa, Ferrusac.

Clausilia plebeja, litigiosa, olonosa, anceps, consimilis, parulocina, Zeigler.

Hab. Central Europe.

Species 31. (Mus. Sowerby.)

CLAUSILIA NIGRICANS. *Cl. testā parvā, levigatā, griseo-nigrescenti, breviusculā, anfractibus 9, convexius-*

culis, aperturā parvā, bicipitatā, plicis margineque albis.

THE BLACKISH CLAUSILIA. Shell small, smooth, blackish-grey, rather short, whorls nine, rather convex, aperture small, with two plaits; plaits and margin white.

PULTENEY. British Isles.

Causilia Marcelia, Risso.

Causilia obtusa, Pfeiffer.

Causilia dilapata, Parreyss.

Causilia bidistula, Mörch.

Causilia elegantula, Parreyss.

Hab. Britain. Germany. France. Scandinavia.

Figure 32.

CLAUSILIA TRIBENS. Species I. Plate I.

Although this is a different variety and worth figuring for the difference, I am now convinced that *Cl. tribens* of Chemnitz, and *Cl. labiata*, Sowerby, *labiatus*, Montfort, are one.

Species 32 is postponed.

Species 33. (Mus. Sowerby.)

CLAUSILIA JAVANA. *Cl. testā gracili fusiformi, fusci, tenuissimè oblique striatā; anfractibus convexiusculis, elevatis, obliquis, ultimo infra attenuato, rimato; aperturā magnā, auriformi, margine reflexo, expanso, albido, levigato, plicis superiori, columellarique parvis, albis, approximatis.*

THE JAVA CLAUSILIA. Shell slenderly fusiform, brown, very finely obliquely striated; whorls rather convex, raised, oblique, the last attenuated below, notched; aperture large, auriform, margin reflected, expanded, whitish, smooth, upper and columellar plaits small, white, approximate.

PICHTER. Monog. Helic. ii. p. 405.

Hab. Java.

This is an elegantly fusiform species with expanded aperture.

Species 34. (Mus. Sowerby.)

CLAUSILIA VENTRICOSA. *Cl. testā fusiformi-subpyramidalī, tenuissimè filistriatā, fusci; anfractibus 12.*

April, 1875.

obliquis, altis, medio et infra ventricosus; suturâ profundâ, incisâ; ultimo anfractu rimato, antice tumido; aperturâ subquadratâ, margine albo; plicâ superiori parvâ, plicâ columellari elevato, fere horizontali.

THE VENTRICOSE CLAUSILIA. Shell fusiform, somewhat pyramidal, very finely thread-striated, brown; whorls thirteen, oblique, elevated, ventricose in the middle and under; suture deep, incised; last whorl notched, tumid anteriorly; aperture rather square, margin white; upper plait small, columellar plait raised, nearly horizontal.

DEAPARNAUD. Con. fluv. Pfr. Mon. ii. p. 465.

Helix perversa, Sturm.

Clausilia latestriata, Parreyss.

Hab. Germany. France, &c.

Species 55. (Mus. Sowerby.)

CLAUSILIA PHILIPPIANA. *Cla. testâ brevi, fusco-rubescens, solidâ, ventricosissimâ, anfractibus 5-6, latis, altis, levigatis, ultimo angustato, juxta aperturam lineatim rimato; aperturâ subauriformi, margine expanso; plicis superiori et columellari validis, approximatis.*

PHILIPP'S CLAUSILIA. Shell short, reddish-brown, solid, very ventricose, whorls five or six, broad, high, smooth; the last narrow, linearly notched close to the mouth; aperture rather auriform, margin expanded; upper and columellar plaits strong, approximate.

PFEIFFER. Monog. ii.

Hab. Birma.

A peculiarly obese shell of few whorls.

Species 56. (Mus. Sowerby.)

CLAUSILIA LINEOLATA. *Cla. testâ fusiformi, elongatâ, angustâ, corneo-fusâ, liris albis tenuibus, cribris sculptâ; anfractibus 13, convexis, ultimo angustato, ad dorsum medio compresso, infra tumido; aperturâ oblongâ, margine externo tenui, supra medium sinuatim subcontracto, plicâ superiori brevissimo, plicâ columellari, elevato, subâterno.*

THE LINEAR CLAUSILIA. Shell fusiform, elongated, narrow, horn-brown, sculptured with white, thin,

close ridges; whorls thirteen; convex, the last narrow, compressed in the middle at the back, tumid below; aperture oblong, outer margin thin, sinuately contracted above the middle; upper plait very short, columellar plait elevated rather internal.

HELD —? Pfeiffer Monog. iv. p. 778.

Hab. Germany. France, &c.

Species 57. (Mus. Sowerby.)

CLAUSILIA OLIVIERI. *Cla. testâ cœrulescenti, strigis undique corneis variegatâ, validè inæqualiter liratâ, elongato-fusiformi; anfractibus 11, supremè declivibus; suturâ profundâ; ultimo anfractu angustato, rimato, ad dorsum medio compresso, infra tumido, validè rugoso; aperturâ falcâ, angustè ovatâ, plicâ superiori parvâ, plicâ columellari elevato, intus angulatâ.*

OLIVIER'S CLAUSILIA. Shell bluish, variegated with horny stripes and waves, strongly unequally ridged, elongated, fusiform; whorls eleven, sloped above; suture deep, last whorl narrow, notched, compressed in the middle at the back, tumid below, strongly wrinkled; aperture fulvous, narrowly ovate, upper plait small, columellar plait raised, angular within.

ROTH. —? Kuster, p. 233. Pfeiffer Mon. ii.

Hab. Rhode Island.

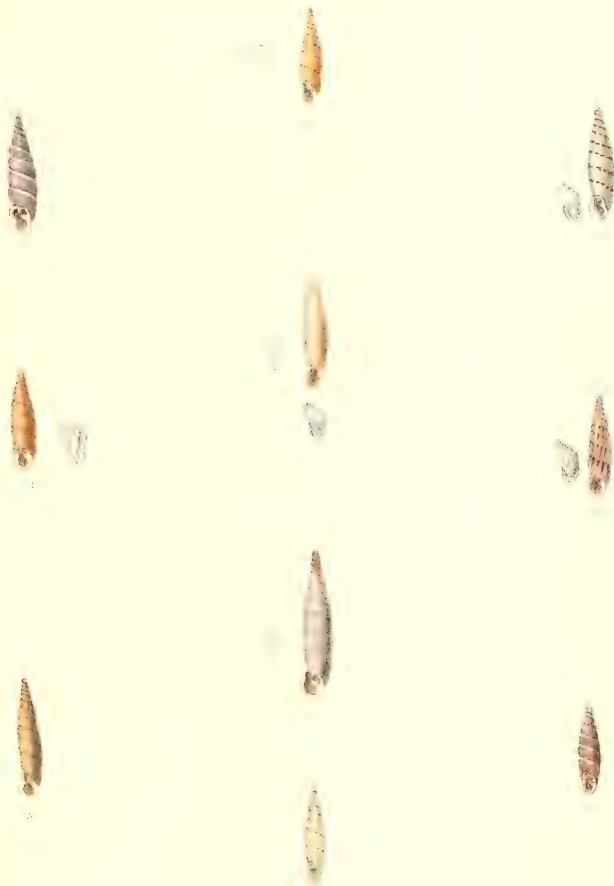
Species 58. (Mus. Sowerby.)

CLAUSILIA LUNULARIS. *Cla. testâ griseo-fusâ, tenuissimè striatâ, subventricosi; anfractibus 8, medianis inflatis, ultimo ad dorsum medio contracto; aperturâ subauriformi, margine tenui, expanso, reflexo; plicis superiori et columellari parvis, approximatis.*

THE LUNULAR CLAUSILIA. Shell grey-brown, very finely striated, rather ventricose; whorls eight, the middle ones inflated, the last contracted in the middle at the back, aperture rather auriform, margin thin, expanded, reflected; upper plait and columellar plait small, approximate.

PFEIFFER. Monograph Heliceorum, iii. p. 608.

Hab. Eubœa.



CLAUSILIA.

PLATE V.

Species 39. (Mus. Sowerby.)

CLAUSILIA OETHOSTOMA. *Cl.*, breviter fusiformi fusco-purpureo, levigatâ; anfractibus 10, convexiusculis, ad suturam crenulatis; ultimo anfractu rimato; aperturâ rectâ, oblongâ, margini albo, paulo reflexo, margine externo propè suturam callosa, plicis superiori et columellari tenuibus, appressatis.

THE STRAIGHT-MOUTHED CLAUSILIA. Shell shortly fusiform, purple-brown, smooth; whorls ten, rather convex, crenulated at the suture; last whorl notched; aperture straight, oblong, margin white, a little reflected, outer margin callous near the suture, upper and columellar plait thin, approximate.

MEYER. Synopsis? Pfeiffer Mon. ii. p. 102.

Clausilia filiformis, Parreyss.

Clausilia tenuata, Zeigler.

Hab. Germany. Hungary, &c.

Species 40. (Mus. Sowerby.)

CLAUSILIA FLUMEA. *Cl.*, testâ brevi, ventricosâ, purpureo-fusâ, levigatâ; anfractibus 10, convexis, superne ad suturam albo tenuatis, medianis ventricosis, ultimo profunde rimato, ad dorsum depresso, infra subcarinato, aperturâ albâ, latè bicipitatâ, majusculâ, margine reflexo, expanso.

THE TEALY-COLOURED CLAUSILIA. Shell short, very ventricose, purple-brown, smooth; whorls ten, convex, banded with white above at the suture, middle ones ventricose, last deeply notched, depressed at the back, subcarinated below; aperture white, with two broad plaits, rather large, margin reflected, expanded.

ROSMÄSSER —? Pfeiffer Mon. ii. p. 401.

Hab. Transylvania.

Species 41. (Mus. Sowerby.)

CLAUSILIA SEMIRUGATA. *Cl.*, testâ griseo-albidâ, lamellis tenuibus tiratâ; anfractibus paucis, elevatis,

medio levigatis, ad suturam tenuiâ fusâ tuberculis albis interruptâ cinctis; ultimo rimato, obliquè angustato, ad dorsum compresso, infra tumido, subcarinato; aperturâ subauriformi, margine tenui, plicâ columellari latâ, albâ.

THE HALF-WINKLED CLAUSILIA. Shell whitish-grey, ridged with thin lamellæ; whorls few, raised, smooth in the middle, belted at the suture with a narrow band interrupted by white tubercles, the last notched, obliquely narrowed, flattened at the back, tumid below, partly keeled; aperture rather auriform, margin thin, columellar plait broad, white.

ZEIGLER. Vert. Claus. p. 29.

Clausilia prunilla, Parreyss.

Clausilia pygmaea, Zeigler.

Clausilia nitida, Mollfeldt.

Clausilia Chersonensis, Ferr.

Clausilia rugata, Parreyss.

Clausilia jasciolaris, Parreyss.

Hab. Dalmatia.

Species 42. (Mus. Sowerby.)

CLAUSILIA STRANGULATA. *Cl.*, testâ breviusculâ, laminatâ tiratâ, griseo-fulvâ; anfractibus 8, convexiusculis, ultimo attenuato, rimato, brevissimè soluto, ad dorsum coarctato, tumidè birugato; aperturâ oblongâ, margine tenui, subexpanso.

THE STRANGLED CLAUSILIA. Shell rather short, ridged with laminae, fulvous-grey; whorls eight, rather convex, the last attenuated, notched, very shortly uncoiled, pressed in at the back with two tumid wrinkles; aperture oblong, margin thin, rather expanded.

FERRUSSAC —? Pfeiffer Mon. ii. p. 467.

Clausilia retusa, Parreyss.

Hab. Syria.

This curious little shell is pressed and knotted behind the aperture so as to give the appearance of strangulation.

April, 1875.

CLAUSILIA.—PLATE V.

Species 43. (Mus. Sowerby.)

CLAUSILIA VALLATA. *Clu. testā brevi, subventricosā, curvā; anfractibus 8, convexiusculis; ultimo rimato, ad dorsum compresso, propē aperturam varice albo, piliceformi vallatā; aperturā albā, marginē crasso, plicā columellari crassā, plicā superiori tenui.*

THE WALLED CLAUSILIA. Shell short, subventricose, horny; whorls eight, rather convex; the last notched, compressed at the back, walled near the aperture with a white, plait-like varix; aperture white, margin thick, columellar plait thick, upper plait thin.

MOUTSON. Ms. Pfeiffer Monog. 1868, p. 453.

Clausilia vallata, Adams.

Hab. Epirus.

Species 44. (Figs. *a, b*, Mus. Sowerby.)

CLAUSILIA RUGOSA. *Clu. testā parvā, subventricosā, tenuiter limatā, fuscā, anfractibus 10, convexis, ultimo angustato, aperturā auriformi, marginē piliceque albis, plicis una brevi superiori, una inferiori, propē marginem instructā, una laterali propē marginem externum conspicuā, una latā, columellari, cum una parvā infra.*

THE RUGOSE CLAUSILIA. Shell small, rather ventricose, finely ridged, brown, whorls ten, convex, the last narrow, aperture auriform, margin and plaits white; plaits, one short upper, one placed near the lower margin, one lateral conspicuous near the outer margin, one broad, columellar with one small underneath.

Clausilia Reboldii, Charpentier.

Clausilia pyrenaica, Charpentier.

Clausilia circulata, Ferrussac.

Clausilia perversa, Moquin.

Hab. France. Northern Italy.

Species 45. (Mus. Sowerby.)

CLAUSILIA TRISTANI. *Clu. testā elongato-fusiformi, purpureo-fuscā, tenuiter limatā, anfractibus 14, altis, ultimo rimato; aperturā latā, bicipitā, muriginē albo, levigato, angustā.*

TRISTAN'S CLAUSILIA. Shell elongated fusiform, purple-brown, finely ridged; whorls fourteen, high, the last notched; aperture broad, two plaited, margin white, smooth, narrow.

PFEIFFER. Proc. Zool. Soc. 1860.

Hab. Mount Atlas, Tuncan.

Species 46. (Mus. Sowerby.)

CLAUSILIA SHANGHAIENSIS. *Clu. testā elongato-fusiformi, levigatā, politā, curvā; anfractibus 12, convexiusculis, ultimo viz rimato, obliquē attenuato; aperturā oblongā, bicipitā, marginē crasso, leri, albo, reflecto.*

THE SHANGHAI CLAUSILIA. Shell elongated fusiform, smooth, polished, horny; whorls twelve, rather convex; the last hardly notched, obliquely attenuated; aperture oblong, with two plaits; margin thick, smooth, white, reflected.

PFEIFFER. Monograph iii. p. 410.

Hab. Shanghai, near China.

Species 47. (Mus. Sowerby.)

CLAUSILIA STIMPSONI. *Clu. testā parvā, albidā, tenui, gracili, tenuiter limatā; anfractibus 10, ultimo elongato; aperturā parvā, bicipitā, faldā, marginē crassiusculā, plicā columellari obliquē elevatā, rix percrenata.*

STIMPSON'S CLAUSILIA. Shell small, whitish, thin, slender, finely ridged; whorls ten, the last elongated; aperture small, with two folds, faldous, margin rather thick, columellar plait obliquely raised, scarcely prominent.

A. ADAMS. Mart. Ostrac. Zool. ii. p. 83.

Hab. Japan.





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CLAUSILIA.

PLATE VI.

Species 48. (Mus. Hanley.)

CLAUSILIA FACILLUM. *Cla. testâ fusiformi, pallidè aurantâ, levi; anfractibus 9, convexis, medianis ventricosis, ultimis contractis; aperturâ oblongâ, albâ, supernè cuneatâ, plicâ superiori validâ; plicâ columellari elongatâ, obliquâ.*

THE WALKING-STICK CLAUSILIA. Shell fusiform, pale orange, smooth; whorls nine, convex, the middle ones ventricose, the last contracted; aperture oblong, white, covered above, upper plait strong; columellar plait elongated, oblique.

BENSON. MS. Hanley, Conchologia Indica, p. 12.

Hab. Nanchai, Khasi Hills.

There appear to be only two specimens of the species known.

Species 49. (Mus. Brit.)

CLAUSILIA PARREYSSI. *Cla. testâ subpyramidatâ, minutè interruptim liratâ, fusco-rubescenti, infrâ medium ventricosâ; anfractibus 9, inferioribus altis, ad suturam tenuissimè plicatis; aperturâ magnâ, biplicatâ, labio externo suprâ medium sinuato; plicâ superiori parvâ, incurvâ; plicâ columellari, altâ, latiusculâ.*

PARREYSS' CLAUSILIA. Shell somewhat pyramidal, minutely interruptedly ridged, reddish brown, ventricose below the middle; whorls nine, the lower ones elevated, very finely plaited at the suture; aperture large, with two plaits; outer lip sinuated above the middle; upper plait small, curved inwards; columellar plait elevated, rather broad.

ZEIGLER. Pfeiffer, Monograph. II. p. 400.

Clausilia marmorata, Parreyss.

Clausilia cerea, Menke.

Hab. Carpathian Mountains.

Species 50. (Mus. Brit.)

CLAUSILIA ANGUSTATA. *Cla. testâ rimatâ, fusiformi, tenui, laevigatâ, conspicuè attenuatâ, apice acuto, suturâ albofilosâ; anfractibus 10-11, planulatis, ultimo infrâ gibbo, striato; aperturâ viz obliquâ, oblongo-ovali; plicâ superiori compressâ, marginum*

non-attendenti, inferiori validâ, tortuosâ; plicis internis 4, inequalibus; peristomate continuo soluto, albo, angustè reflexo.

THE NARROW CLAUSILIA. Shell notched, fusiform, thin, smooth, conspicuously attenuated, with acute apex, suture white-threaded; whorls ten or eleven, flattened, last gibbous below, striated; aperture very slightly oblique; oblong-ovate; upper plait compressed, not touching the margin, lower plait strong, tortuous, inner plaits four, unequal; peristome continuous, detached, white, narrowly reflected.

BIETZ. Pfeiffer.

Hab. Transylvania.

Species 51. (Mus. Benson, Hanley.)

CLAUSILIA BULBUS. *Cla. testâ pupæformi, ventricosissimâ, castaneâ, rimatâ; anfractibus 4, duobus apicalibus parvisculis, tertio magno, alto, valdè inflato, ultimo alto, versûs aperturam angustato; aperturâ parvâ, auriculiformi, peristremate pallidè carneo, crasso, reflexo, columellâ biplicatâ.*

THE BULB CLAUSILIA. Shell pupiform, very ventricose, chestnut, notched; whorls four, two apical, rather small, third large, elevated much indented, last elevated, narrow towards the aperture; aperture small, ear-shaped, peristreme pale flesh, thick, reflected, columella with two folds.

BENSON. Annals of Natural History, 1863.

Hab. Near Moulmein, Birmah.

Resembling *Clausilia Philippina*, but with the whorls fewer, much more inflated and unequal.

Species 52. (Fig. a, b, Mus. Brit.)

CLAUSILIA VALIDA. *Cla. testâ subfusiformi, solidâ, pallidè cornèâ, vel flavidâ, medio anfractu latè unifasciatâ, tenuiter liratâ; anfractibus 8-9 altis, subcylindricis, medianis inflatis, ultimo altissimo, versûs aperturam attenuato; aperturâ magnâ, altissimâ auriformi, plicâ superiori elongatâ, plicis super-columellari unâ validâ, elongatâ, alterâ parvâ, injunctâ.*

CLAUSILIA.—PLATE VI.

THE STRONG CLAUSILIA. Shell rather fusiform, solid, pale horny, or yellowish with a broad band in the middle of the whorls, finely ridged; whorls eight to nine, elevated, rather cylindrical, middle ones inflated, last very high, attenuated towards the aperture; aperture large, very high, auriform, upper plate elongated, plaits on the columella, one strong, elongated, the other small, lower.

PFEIFFER. Monographia Helicorum III.
Hab. Lien Kien.

Species 53. (Mus. Hanley.)

CLAUSILIA INSIGNIS. *Cla. testâ fusiformi, rimatâ, castaneâ, levigatâ, propè suturam fasciâ pallidâ cinctâ; anfractibus 9, convexis, gradatim versus terminos attenuatis; ultimo altissimo; aperturâ subtrigonâ, margine purpureo crasso; labio externo lato, superne incrassato, sinuato; plicis superiori et columellari rotatis.*

THE WONDERFUL CLAUSILIA. Shell fusiform, notched, chestnut, smooth, girt with a pale band near the suture; whorls nine, convex; gradually attenuated towards the end; last very high; aperture nearly trigonal, margin purple, thick, outer lip broad, thickened and sinuated above; upper and columellar plaits strong.

GOULD. Proceedings of the Boston Society of Natural History.

Hab. Tavoy, Birmah.

Species 54. (Mus. Brit.)

CLAUSILIA MARGINATA. *Cla. testâ fusiformi, solidâ, fusco-cornâ, levigatâ; anfractibus 10, ad suturam fîo-marginatis, apicalibus 6 contractis, inferioribus ventricosâ, ultimo rimatâ, aperturâ contractâ, elevatâ, margine crasso, labio externo ad medium sinuatâ plicato, plicis superiori et columellari crassis, marginis.*

THE BORDERED CLAUSILIA. Shell fusiform, solid, brown-horn, smooth; whorls ten, thread-bordered at the suture, the six towards the apex contracted, lower ones ventricose, last notched; aperture contracted, elevated, margin thick, outer lip with a sinuous plait in the middle; upper and columellar plaits thick, large.

ZEIGLER.

Clausilia Democletiana, Menke.

Clausilia bilabiata, Fr.

Clausilia vitrea, Bietz.

Hab. Transylvania.

Species 55. (Mus. Brit.)

CLAUSILIA BINOTATA. *Cla. testâ breviusculâ, subpyramidatâ; pallidâ succineâ; anfractibus 9, breviusculis ad suturam denticulato-plicatis, apicalibus sensim contractis, medianis convexis, ultimo ad dorsum lineâ pallidis semilunaribus duabus notato; aperturâ latâ, margine externo supra medium sinuatâ plicato, columellâ duplicatâ.*

THE TWO-MARKED CLAUSILIA. Shell rather short, rather pyramidal; pale amber; whorls nine, rather short, with tooth-like plaits at the suture, three apical, sensibly contracted; middle convex, last marked at the back with two pale semilunar lines; aperture broad, external margin with a sinuous plait above the middle; columellar with two plates.

ROSMÄSLER. Pfeiffer, Monograph. II.

Clausilia consentanea, Zeigler.

Clausilia bipustulata, Kuster.

Hab. Istria.

Species 56. (Mus. Brit.)

CLAUSILIA ITALICA. *Cla. testâ fusiformi, fusco-plumbeâ, medio ventricosâ; anfractibus 9-10, ad suturam denticulato-plicatis, apicalibus sensim contractis, medianis inflatis, ultimo infra angustato, ad dorsum lineâ pallidâ flexuosâ notato; aperturâ subovatâ, labio externo intus incrassato, plicis superiori et columellari superiori elongatis, inferiori parvis.*

THE ITALIC CLAUSILIA. Shell fusiform, plum-brown, ventricose in the middle; whorls nine to ten, with tooth-like plaits on the suture, apical sensibly contracted, middle inflated, last narrowed below, marked with a flexuous pale line on the back.

MAERTENS. Pfeiffer, Monog. II.

Clausilia aboguttulata, Meyner.

Clausilia punctata, Michaud.

Clausilia crenata, Menke.

Hab. Lombardy; Tyrol; Badia, &c.





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CLAUSILIA.

PLATE VII.

Fig. 53 b. (Mus. Benson.)

CLAUSILIA INSGNIS. This shell is figured in Mr. Hanley's work on Indian Shells as a more slender variety of the species figured in Plate VI.

Species 57. (Mus. Brit.)

CLAUSILIA BILAMATA. *Cla. testâ brevi, fulvâ, levî, anfractibus 9, brevibus, medianis ventricosâ, ul suturam minutissimè plicatis; aperturâ subquadratâ, margine crasso, labio interno biplicato, labio externo duplicato, suprâ medium plicâ dentiformi sinuato.*

THE DOUBLE-LIPPED CLAUSILIA. Shell short, fulvous, smooth, whorls 9, short, middle ventricose, very finely plaited at the suture; aperture rather square, margin thick, inner lip with two plaits, outer lip doubled, sinuated with a tooth-like plait above the middle.

WAGNER. Pfeiffer, Mon. II.

Clausilia reflexa, Zeigler.

Clausilia rhytelabris, Cautraîne.

Clausilia labiocrossa, Mühlfeldt.

Clausilia phanotabris, Rossmäslér.

Hab. Dalmatia.

Remarkable for the thickness and double character of the outer lip.

Species 58. (Mus. Brit.)

CLAUSILIA SANDERII. *Cla. testâ fusiformi, obscurè roseo-albidâ, levî, medio ventricosissimâ, anfractibus 10-11, apicalibus parvis, medianis inflatis, altis, ultimo rimato, versûs aperturam contracto, aperturâ magnâ, margine crasso; labio columellari validè biplicato, labio externo suprâ medium sinuatim tumido.*

SANDER'S CLAUSILIA. Shell fusiform, dull rose-white, smooth, very ventricose in the middle; whorls 10-11, apical small, middle inflated, high, last notched, contracted towards the aperture; aperture large, margin thick, columellar lip strongly plaited, outer lip sinuously swelled above the middle.

KÜSTER. Pfeiffer, Mon. II.

Clausilia honorifica, Parreyss.

Clausilia magnifica, Parreyss.

Hab. Dalmatia.

Species 59. (Mus. Brit.)

CLAUSILIA SUMATRANA. *Cla. testâ solidâ, brevî, ventricosâ, plumbeâ et succinâ, anfractibus 8, supernè albo-fasciatis, 6 apicalibus convexis, brevibus, penultimo alto, ventricoso, ultimo alto infundè contracto; aperturâ auriformi, magnâ, biplicatâ, labio externo medio tumido, plicâ columellari obliquè tortuâ.*

THE SUMATRA CLAUSILIA. Shell solid, short, ventricose, plum-coloured and amber; whorls 8, white-banded above, 6 apical convex, short, penultimate high, ventricose, last high, contracted below; aperture auriform, large, biplicate, outer lip swelled in the middle, columellar plait obliquely tortuous.

MARTENS. Berlin Akad. Pfeiffer, Mon. VI.

Hab. Island of Sumatra.

Species 60. (Mus. Benson.)

CLAUSILIA OVATA. *Cla. testâ brevî, ventricosâ, fumoso-castaneâ, levigatâ, solidâ, anfractibus 6, supernè albo-fasciatis, duobus apicalibus parvis, brevibus, tribus, medianis altis, inflatis, ultimo altissimo, rimato, versûs aperturam subcontracto; aperturâ auriformi, margine purpurascens, crassiusculo, rotundo, plicâ superiori parvâ, plicâ columellari elevatâ, tenui, parvâ.*

THE OVATE CLAUSILIA. Shell short, ventricose, smoky-chestnut, smooth, solid; whorls 6, white-banded above, two apical small, short, three middle high, inflated, last very high notched, a little contracted towards the aperture; aperture auriform, margin purplish, rather thick, rounded, superior plait small, columellar plait raised, thin, small.

BLANFORD. Journal of Asiatic Society of Bengal, 1872.

Hab. Tongbu, Birmah.

CLAUSILIA.—PLATE VII.

Species 61. (Mus. Benson.)

CLAUSILIA LOXOSTOMA. *Cla. testâ fusiformi, fusco-corned, laxigata; anfractibus 9, ad suturam plicatis, medianis ventricosis, altis, ultimo alto, infra subangustato, rimato; aperturâ magnâ, obliquè subtrigona, margine reflexo, albo, planiusculo, labio externo supernè sinuatim tumido, labio interno bicipitato.*

THE OBLIQUE-MOUTHED CLAUSILIA. Shell fusiform, horn-brown, smooth; whorls 9, plaited at the suture, the middle ones ventricose, high, last high, rather narrowed below, notched; aperture large, obliquely subtrigonal, margin reflected, white, rather flat, outer lip sinuously swelled above, inner lip bicipitate.

BENSON. Pfeiffer, Mon. II. p. 404.

Clausilia Bengalensis, Busch.

Hab. Bengal.

Species 62. (Mus. Hanley.)

CLAUSILIA FUSIFORMIS. *Cla. testâ flavidâ, minutè striatâ, fusiformi, ventricosâ; anfractibus 8, convexis, versùs apicem gradatim angustatis, medianis ventricosis, altis, ultimo angustiori, altissimo; aperturâ albâ, auriformi, margine crasso, labio externo propè suturam sinuatim angustato, medio et infra tumido; labio interno bicipitato, plicâ columellari alto, planato.*

THE FUSIFORM CLAUSILIA. Shell yellow, minutely striated, fusiform, ventricose; whorls 8, convex, gradually narrowed towards the apex, middle ventricose, high, last narrower, very high; aperture white, auriform, margin thick, outer lip sinuously narrowed near the suture, tumid in the middle and below; inner lip with two plaits.

BLANFORD. Contributions to Indian Malacology, v. 1865, p. 16.

Hab. Arakan Mountains.

Species 63. (Mus. Brit.)

CLAUSILIA CYCLOSTOMA. *Cla. testâ fusco-rubescenti, tenuiter lirata, brevis, fusiformi; anfractibus 9, apicalibus parvis, medianis altis ventricosis, ultimo altissimo, rinato, ad dorsum obliquè bicaricoso; aperturâ latâ, rotundâ, margine albo, crasso, latè reflexo, plicis labii interni parvis, acutis.*

THE ROUND-MOUTHED CLAUSILIA. Shell reddish-brown, finely ridged, short, fusiform; whorls 9, apical small, middle high, ventricose; last very high,

notched, with two oblique varices at the back; aperture broad, rounded, margin white, thick, broadly reflected, plaits of the inner lip small, acute.

PFEIFFER. Monographia Heliceorum, IV. p. 784.

Hab. Central America.

Species 64. (Mus. Brit.)

CLAUSILIA CATTARENSIS. *Cla. testâ subpyramidalâ, medio paulò inflatâ, plumbeâ et costatâ; anfractibus 11, albo, marginatis, apicalibus 6, parvis, brevibus, medianis latioribus, ad laterâ rectiusculis, ultimo alto, versùs aperturam vix angustato; aperturâ magnâ, subquadratâ, plicâ superiori validâ, plicâ columellari altâ, obliquâ, plicis internis supernè duabus linearibus, infra columellam, unâ parvâ, obliquâ.*

THE CATTARO CLAUSILIA. Shell somewhat pyramidal, a little inflated in the middle, plum-coloured and chestnut; whorls 11, white-bordered, 6 apical small, short, middle wider, rather straight at the sides, last high, scarcely narrowed towards the aperture; aperture large, subquadrate, upper plait strong, columella plait high, oblique, inner plaits two linear above, one small, oblique, below the columella.

ZEIGLER. Pfeiffer, Monog. II. 437.

Clausilia laxigata, Mühl.

Clausilia tesnacensis, Parreyss.

Hab. Cattaro.

Species 65. (Mus. Hanley? copied.)

CLAUSILIA TURRITELLA. *Cla. testâ flavidâ, angustissimâ, elongatâ, pyramidalâ; anfractibus 14, lentè crescentibus, convexiusculis, ultimo oblongo; aperturâ oblongo-subquadratâ, suprâ columellam uniplicatâ, columellâ rectâ.*

THE TURRITELLA CLAUSILIA. Shell yellow, very narrow, elongated, pyramidal; whorls 14, slowly increasing, rather convex, last oblong; aperture oblong, rather square, with a single plait over the columella, columella straight.

SOWERY.

Clausilia cylindrica, Hanley, as of Gray, MS.

Hab. Landour.

This shell seems so different from the type specimens in the Brit. Mus. that after figuring it I have felt compelled to give it a new name.





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CLAUSILIA.

PLATE VIII.

Species 66. (Mus. Brit.)

CLAUSILIA SUCCINEATA. *Cla. testâ parvâ, brevî, subfusiformi, obscure succineâ, tenuissimè striatâ, anfractibus 10, apicalibus 5 parvis, attenuatis; medianis ventricosâ, ultimo elongatâ, ad dorsum plicatâ; aperturâ ovatâ; plicâ superiori subdistanti, plicâ columellari magnâ; labio externo supra medium dentiformi, tumido.*

THE AMBER CLAUSILIA. Shell small, short, subfusiform, dull amber, very finely striated, whorls 10; apical 5 small, attenuated, middle ventricose, last plaited at the back; aperture ovate, upper plait rather distant, columellar plait large; outer lip with a tooth-like swelling above the middle.

ZEIGLER. Pfeiffer, Monograph. II.

Clausilia nympha, et *C. striatocollis*, Parreyss.

Hab. Croatia.

Species 67. (Mus. Brit.)

CLAUSILIA FIMBRATA. *Cla. testâ brevî, ventricosâ, fusiformi, albidâ, lavigatâ; anfractibus 10, ad suturam fimbriatâ, convexâ, apicalibus sensim attenuatis, medianis magnis, ultimo altiusculo, propè aperturam contracto, ad dorsum propè marginem tumido; aperturâ subquadratâ, labio externo supra medium sinuatim tumido, subdentato; plicâ columellari latâ, plicâ superiori parvâ.*

THE FRINGED CLAUSILIA. Shell short, ventricose, fusiform, whitish, smooth; whorls 10, fringed at the suture, convex, the apical ones notably attenuated, middle large, but rather high, contracted near the aperture, tumid near the margin at the back; aperture rather square, outer lip sinuated with a tooth-like swelling above the middle, columellar fold broad, upper fold small.

MÜHLEFELDT. Pfeiffer, Mon. II. p. 399.

Clausilia saturata and *Cl. phalerata*, Zeigler.

Clausilia virens, Mühlfeldt.

Clausilia styriaca, Parreyss.

Hab. Illyria—Croatia.

Species 68. (Mus. Brit.)

CLAUSILIA BLANDA. *Cla. testâ subpyramidalâ, lavigatâ, pallidè succineâ, semipellucidâ; anfractibus 10, apicalibus tribus parvis, convexis, alteris subventricosâ, ad laterâ rectiusculis; ultimo alto; aperturâ subrotatâ, margine albo, tenuisculo, labio externo propè suturam unidentatâ, labio interno lato, plicâ superiori parvâ, plicâ columellari latâ, inferiori parvâ, calidâ.*

THE BLAND CLAUSILIA. Shell rather pyramidal, smooth, pale amber, semi-pellucid; whorls 10, three at the apex small, convex, the others rather ventricose, rather straight at the sides, last high, aperture rather ovate, margin white, rather thin, outer lip with a tooth near the suture, inner lip broad, upper plait small, columellar plait broad, lower small, strong.

ZEIGLER. Pfeiffer, Mon. II. p. 418.

Clausilia castanea, Kuster.

Clausilia striata, Mühlfeldt.

Hab. Dalmatia.

Species 69. (Mus. Theobald? copied.)

CLAUSILIA MASONI. *Cla. testâ fusiformi, fasciâ, gracili, anfractibus 10, medianis et inferioribus altis, obliquè ventricosâ, propè suturam depressâ, ultimo elongatâ, attenuatâ, supra aperturam profundè rimatâ; aperturâ nascentâ, margine effuso, labio interno superne triplicatâ.*

MASON'S CLAUSILIA. Shell fusiform, brown, rather slender, whorls 10, middle and lower high, obliquely ventricose, depressed near the suture, last elongated, attenuated, deeply notched above the aperture; aperture very large, margin effuse, inner lip three-plaited above.

THEOBALD. Journal of Asiatic Society of Bengal, v.

Hab. Near Tonghoo mountains, Pegu, and Martaban.

Species 70. (Mus. Crosse? copied.)

CLAUSILIA SANDBERGERI. *Cla. testâ rimatâ, solidâ, fusiformi, ventricosâ, regulariter tenuissimè liratâ,*

CLAUSILIA.—PLATE VIII.

griseo-corné, albo strigatâ; anfractibus 12, apicalibus angustis, brevibus, alteris tumidis usque ad ultimum gradatim crescentibus; apertura ovata, margine tenui, albo, labio interno triplicato, plicâ superiori validâ, plicâ columellari superiori latâ, inferiori parvâ.

SAMBEGER'S CLAUSILIA. Shell notched, solid, greyish-horn, striped with white, whorls 12, the apical ones narrow, short, the others tumid, gradually increasing to the last; aperture ovate, margin thin, white, inner lip with three plaits; upper plait strong, upper columellar plait broad, lower small.

MOUSSON. Crosse, Journal de Conchyliologie, 1873.

Hab. Borschoin, Russia.

Species 71. (Mus. Crosse ? copied.)

CLAUSILIA FUNICULUM. *Cla. testâ subcylindricâ, pallidissimè cornea, tenuiter lirata; anfractibus 8-9, altis, paulò convexis, gradatim crescentibus, ultimo oblique descendenti; apertura pyriformi, labio externo tenui, labio interno super anfractuum ultimum paralleliter quadruplicato.*

THE LITTLE-CHINNEY CLAUSILIA. Shell subcylindrical, very pale horn, finely lirated; whorls eight to nine, high, a little convex, gradually increasing; last obliquely descending; aperture pyriform, outer lip thin; inner lip with four parallel plaits upon the body whorl.

MOUSSON. Crosse, Journ. de Conchyliologie, 1873.

Hab. — ?

The four parallel plaits on the part of the inner lip where it laps over the body whorl is a peculiar characteristic of this species.

Species 72. (Mus. Hanley.)

CLAUSILIA TURA. *Cla. testâ elongatâ, eleganter fusiformi, tenuiter lirata; anfractibus 12, obliquis, cæteris apicem sensim attenuatis, brevibus, medianis altis, ultimo elongato, suprâ aperturam oblique rimato; apertura marina, auriformi, margine albo, effuso, expanso, labio interno medio buplicato, plicis validis, approximatis.*

THE TUBE CLAUSILIA. Shell elongated, elegantly fusiform, finely ridged; whorls twelve, oblique,

sensibly attenuated towards the apex, middle high, last elongated, obliquely notched above the aperture; aperture very large, auriform, margin white, effuse, expanded, inner lip with two plaits in the middle, plaits strong, approximate.

HANLEY. Proc. Zool. Soc., 1868.

Hab. Shan States.

Species 73. (Mus. Brit.)

CLAUSILIA GRACILICOSTA. *Cla. testâ gracili, fusiformi, tenuiter regulariter liris laminiformibus sculptâ, anfractibus 12, gradatim in medio inflatis, ad laterâ rectiusculis, ultimo profundè rimato, antè rimam oblique carinato, propè aperturam soluto; apertura ovata, rectâ, infrâ subacuminatâ, intus rimatâ, labio externo suprâ medium sinuatum tumido, labio interno angusto, plicâ superiori brevi, plicâ columellari altâ.*

THE THIN-RIBBED CLAUSILIA. Shell slender, fusiform, regularly sculptured with thin laminated ridges; whorls twelve, gradually inflated in the middle, rather straight at the sides, the last deeply notched, obliquely keeled in front of the notch, uncoiled near the mouth; aperture oval, straight, rather acuminate below, notched within; outer lip sinuously tumid above the middle; inner lip narrow, upper plait short, columella plait high.

ZEIGLER. Pföffer, Monograph, II. 414.

Clausilia varicosa and *Clausilia porcata*, Zeigler.

Hab. Russian Mountains.

Species 74. (Mus. Brit.)

CLAUSILIA CRASSICOSTATA. *Cla. testâ pallidè fulvâ, brevi, fusiformi, costis solidis substantibus, rectiusculis, lirata, medio ventricosâ; anfractibus paucis, apicalibus sensim contractis, medianis altis, ad laterâ rectiusculis, ultimo altissimo, infrâ attenuato, profundè rimato, costis ad dorsum infrâ ruidatis; apertura obliquâ, margine effusâ, reflexâ, albidâ, labio externo crasso, labio interno angusto, plicis columellari et superiori validis, approximatis.*

THE THICK-RIBBED CLAUSILIA. Shell pale fulvous, short, fusiform, ridged with solid, rather distant, rather straight ribs, ventricose in the middle; whorls few, apical ones notably contracted, middle

CLAUSILIA.—PLATE VIII.

high, rather straight at the sides, last very high, attenuated below, deeply notched, ribs waved at the lower part of the back; aperture oblique, margin effuse, reflected white, outer lip thick, inner lip narrow; columella and upper plaits strong, approximate.

Benson. Pfeiffer, Monograph. IV. p. 733.

Hab. Sicily.

Species 75. (Mus. Benson, Hanley.)

CLAUSILIA Jos. *Cha. testâ brevis, fusiformi, cornu, lirati, medio inflati; anfractibus medianis altis, ultimo altissimo rimato, aperturâ subtrigona,*

marginē albo, tenuiusculo, labio externo propē suturam sinuato suprâ medianâ tumido; labio interno buplicato; plicâ superiori distantî, brevi, plicâ columellari obliquâ, validd.

THE JOS CLAUSILIA. Shell short, fusiform, horny, ridged, middle inflated; middle whorls high, the last very high, notched, aperture nearly trigonal, margin white, rather thin, outer lip sinuous near the suture, tumid above the middle; inner lip with two folds; upper fold distant, short; columellar fold oblique, strong.

Benson. Pfeiffer, Monograph. IV. p. 761.

Hab. Darjiling, Himalayas.





CLAUSILIA.

PLATE IX.

Species 76. (Mus. Brit.)

CLAUSILIA BIDENS. *Cla. testā parvā, ventricosā, fere albā, brevī, levigatā; anfractibus 8, medianis ventricosis, ut suturam minutē distanter plicatis, ultimo infra subcontracto, aperturā latē ovatā intus propē marginem externum incrassatā, labio interno tenui, plicā superiori minūtā, plicā columellari magnā.*

THE TWO-TOOTHED CLAUSILIA. Shell small, ventricose, nearly white, smooth; whorls eight, middle ones ventricose, minutely distantly plaited at the suture, last a little contracted below; aperture broadly ovate, thickened within near the outer margin, inner lip thin, upper plait minute; columellar plait large.

LINNEUS. Syst. Nat. Pfeiffer Monog. VI. 454.

Helix papillaris, Bruguière, &c.

Clausilia Mediterranea, Gray.

Clausilia vitrea, Stenz.

Clausilia virgata, Jan.

Clausilia sulcitana, Gené.

Hab. Countries of the Mediterranean.

Species 77. (Mus. Brit.)

CLAUSILIA DUBIA. *Cla. testā plumbeā, parvā, subfusiformi, regulariter livatā; anfractibus 10, ultimo paulō contracto, aperturā infusculā, obliquā, plicis palatibus prominentibus, plicā superiori labii interni acutā, plicā columellari duplicatā.*

THE DOUBTFUL CLAUSILIA. Shell plum-coloured, small, rather fusiform, regularly ridged; whorls ten, last a little contracted; aperture rather large, oblique, palate plaits prominent, upper plait of the inner lip sharp, columellar plait duplicate.

DEPANAUD. Moll. fluvs. et ters.

Clausilia speciosa, Hindobouensis, Transylvanica, Tettelbachiana et gracile, Pfeiffer.

Clausilia Schelecti, Zele.

Clausilia obetana, Dupuy.

Hab. Central Europe.

Species 78. (Mus. Hanley.)

CLAUSILIA ARAKANA. *Cla. testā fusiformi-pyramidatā, flavidā, levigatā; anfractibus 12, suprā medium*

sensim contractis, brevissimis, infra medium convexis, ventricosis; aperturā albā, margine externo suprā medium tumido, labio interno biplicato, plicā columellari elevatā.

THE ARAKAN CLAUSILIA. Shell fusiform, pyramidal, yellow, smooth; whorls twelve, those above the middle notably contracted; very short below the middle convex, ventricose; aperture white, outer margin tumid above the middle; inner lip with two plaits, columellar plait elevated.

THEOBALD. Journ. Asiatic Soc. Bengal, 1872.

Hab. Moulemein, Birmah.

Species 79. (Mus. — 1 Copied.)

CLAUSILIA INDEX. *Cla. testā pupiformi, tenuiter striatā, ventricosā, fuscā, costano striatā, anfractibus 10, apicalibus 5, levibus, alteris convexis, altiusculis; aperturā ovatā, margine fulvo, labio interno triplicato, plicis æquidistantibus, brevibus.*

THE INDEX CLAUSILIA. Shell pupa-shaped, finely striated, ventricose, brown, striped with chestnut, whorls ten, five apical smooth, the others convex, rather higher; aperture ovate, margin fulvous, inner lip with three equidistant short plaits.

MOUSSON. Crosse, Journ. de Conch., 1873, p. 215.

Hab. Borschom, in Russia.

Species 80. (Mus. Brit.)

CLAUSILIA CECILLE. *Cla. testā fusiformi-pyramidatā, solidā, leviter striatā; corneo-plumbeā, medio et infra ventricosā, anfractibus 12, apicalibus 7 contractis, brevibus, alteris gradatim latioribus, altis; aperturā oblongā, margine albo, crasso; propē suturam sinuato, attenuatā, labio interno biplicato.*

CECILLE'S CLAUSILIA. Shell fusiform, pyramidal, solid, lightly striated, horny-plum-coloured; ventricose in the middle and under; whorls twelve, apical ones seven, contracted, short, the rest gradually broader, elevated; aperture oblong, margin white, thick, sinuous near the suture, attenuated, inner lip biphilic.

PHILIPPI. Pfeiffer, Novit. Conch., p. 122.

Hab. China.

CLAUSILIA.—PLATE IX.

Species 81. (Mus. Brit.)

CLAUSILIA DORBINI. *Cla. testā elongatā, subfusiformi, corneo-rubescenti; infusci castaneis, levigatā; anfractibus circa 10, apicalibus 4 contractis, brevibus, alteris altissimis, moderatē ventricosus; ultimo elongato, attenuato, suprà aperturam rimato; aperturā obliquā, anticē productā, margine crasso, albo, rotundo, labio interno bicipitato, plicis elongatis; plicā internā unā obliquā conspicuā.*

DORBIN'S CLAUSILIA. Shell elongated, rather fusiform, reddish horn, chestnut below, smooth; whorls about ten, the four apical ones contracted, short, the others very high, moderately ventricose; last elongated, attenuated, notched above the aperture; aperture oblique, produced anteriorly; margin thick, white, rounded, inner lip with two plaits, plaits elongated; an inner plait oblique, conspicuous.

PFEIFFER. Malak. Bl., 1860, p. 213.

Hab. Venezuela.

Species 82. (Mus. Crosse.)

CLAUSILIA YOKOHAMENSIS. *Cla. testā ventricosā, fusiformi, crassiusculā, fusco-ornatā, leviter et irregulariter striatā; anfractibus 9-10, altis, moderatē convexis, apicali obtusissimo, penultimo latissimo, ultimo elongato, non rimato; aperturā violacē, pyriformi-ovatā, prorsum productā; margine late reflexo, plicā superiori, labii internē validā, compressā, plicā superiori columellari oblique, inferiori parā.*

THE YOKOHAMA CLAUSILIA. Shell ventricose, fusiform, rather thick, horny-brown, slightly and irregularly striated; whorls nine to ten, high, moderately convex, apical one very obtuse, penultimate very broad, last elongated, not notched; aperture violet, pyriform-ovate, produced forwards; margin broadly reflected; upper plait of the inner lip strong, compressed; upper columellar plait oblique, lower small.

CROSSE. Journal de Conchyliologie, 1873, p. 133.

Hab. Yokohama, Japan.

Species 83. (Mus. —? Copied.)

CLAUSILIA SEMILAMELLATA. *Cla. testā tenui, parvā, albā, levigatā, fusiformi, medio subventricosā; anfractibus 8-9, inferioribus altis, moderatē convexis, ultimo elongato, attenuato, dorso propē aperturam*

lirato, suprà aperturam rimato; aperturā obliquē productā, ovatā, subsolutā, margine tenui, angustē reflexo, plicā superiori, labii internī elongatā, columellā, arcuatā, angustā, plicis 5 parvis, parallelis aequalibus instructā.

THE HALF-LAMINATED CLAUSILIA. Shell thin, small, white, smooth, fusiform, rather ventricose in the middle; whorls eight or nine, lower ones high, moderately convex, last elongated, attenuated, ridged near the aperture on the back, notched above the aperture; aperture obliquely produced, ovate, rather solid, margin thin, narrowly reflected, upper plait of the inner lip elongated, columella arched, narrow, set with five small, parallel equal plaits.

MOUSSEN —? Crosse Journ. Conch.

Hab. —?

Species 84. (Mus. —? Copied.)

CLAUSILIA SIEVERSI. *Cla. testā albidā, parvā, subcylindraceā, attenuatā levigatā, anfractibus 9-10, rix convexis, ultimo obliquē elongato, suprà aperturam rimato; aperturā pyriformi, plicā superiori labii internī prominenti, columellā angustā, arcuatā, creberrimē transversē plicatā.*

CLAUSILIA SIEVERSI. Shell whitish, small, rather cylindrical, attenuated, smooth, whorls nine or ten, very little convex, the last obliquely elongated, notched above the aperture; aperture pyriform, upper plait of the inner lip prominent, columella narrow, arched, very closely transversely plaited.

PFEIFFER —? Crosse Journ. Conch., 1873, p. 214.

Hab. Lenkoran, Russia.

The granulations, or plaits on the arched columella, are much more numerous in this than in the preceding species, and the last whorl has no ridges on the back.

Species 85. (Mus. Brit.)

CLAUSILIA COMMUTATA. *Cla. testā parvā, pallidē cornēā, levigatā, fusiformi, anfractibus brevibus, versūs apicem gradatim contractis, medio moderatē inflatis; aperturā ovatā, bicipitatā.*

THE COMMUTED CLAUSILIA. Shell small, pale horny, smooth, fusiform, whorls short, gradually contracted towards the apex, moderately inflated in the middle, aperture ovate, bicipitate.

ROSSMASLEE. Pfeiffer, Monog. Hel. II. p. 401.

Hab. Spain, Sicily, &c.



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CLAUSILIA.

PLATE X.

Species 86. (Mus. Brit.)

CLAUSILIA Plicatula. *Cl. testâ fusiformi, rufo-fulvâ, tenuissimè striatâ, versus apicem attenuatâ, medio ventricosâ; anfractibus duodecenis, ultimo sub-tracto; aperturâ subquadratâ, superne ad suturam subacuminatâ, columellâ inter laminas dentatè plicatâ.*

THE PLATED CLAUSILIA. Shell fusiform, reddish-fawn, very finely striated, attenuated towards the apex, ventricose in the middle; whorls twelve, the last contracted; aperture rather square, acuminated above at the suture, columella tooth-plaited between the folds.

MONTAG. Pfeiffer, Mon. Hel. VI. p. 498.

Hab. Pyrmont.

Species 87. (Mus. Brit.)

CLAUSILIA MEISNERIANA. *Cl. testâ oblongo-fusiformi, pallidè fulcâ, tenuiter liratâ, superne attenuatâ, medio inflatâ, apice rotundâ; anfractibus tridecenis, moderatè convexis; aperturâ mediocrî, laminâ columellari prominenti, labio externo superne flexuoso, prope suturam incrassatâ.*

MEISNER'S CLAUSILIA. Shell oblong-fusiform, pale fulvous, finely ridged, attenuated above, inflated in the middle, apex rounded; whorls thirteen, moderately convex; aperture middle-sized, columellar lamina prominent, outer lip flexuous above, thickened near the suture.

SHUTTLEWORTH. Pfeiffer, Mon. Helic. VI. p. 405.

Hab. Corsica, Sardinia, &c.

Species 88. (Mus. Brit.)

CLAUSILIA CUMINGIANA. *Cl. testâ levigatâ, fusco-purpureâ, elongatâ, subpyramidatâ, versus apicem gradatim attenuatâ; anfractibus decenis, albis, perobliquis, ad latera rectiusculis; aperturâ magnâ, auriformi, lamine columellaribus duabus, approximatis, margine albo, crasso.*

CUMING'S CLAUSILIA. Shell smooth, brown-purple, elongated, subpyramidal, gradually attenuated towards the apex; whorls ten, white, very oblique, rather straight at the sides; aperture

large, ear-shaped, columellar laminae two, approximate, margin white, thick.

PFEIFFER, Mon. Helic. VI. p. 406.

Hab. Philippines.

Species 89. (Mus. Brit.)

CLAUSILIA EXCELLENS. *Cl. testâ pallidè corneâ, solidâ, tenuiter sulcatâ, magnâ, centricosâ, subfusiformi; anfractibus undecenis, perobliquis; aperturâ magnâ, auriformi, laminâ parietali prominenti, columellari elevatâ, plicâ tuberculiformi trans labrum infra trajectâ; labio externo supra medium incrassatâ.*

THE EXCELLING CLAUSILIA. Shell pale horn, solid, finely sulcated, large, ventricose, rather fusiform; whorls eleven, very oblique; aperture large, auriform, parietal lamina prominent, columellar raised, tuberculiform plate below crossing the inner lip, outer lip thickened above the middle.

PFEIFFER, Mon. Helic. VI. p. 427.

Hab. Loo Choo.

A fine species, nearly white, with the last whorl more strongly wrinkled than the others.

Species 90. (Mus. Brit.)

CLAUSILIA PLATYDERA. *Cl. testâ solidâ, subventricosâ, solidiusculâ, pallidè corneâ, pyramidatâ, tenuissimè striatâ; anfractibus undecenis, gradatim attenuatis; aperturâ subauriformi, laminâ columellari angustâ, subverticali, margine albo, incrassatâ, supra medium labii externi tunidâ.*

THE FLAT-SCAPED CLAUSILIA. Shell solid, rather ventricose, pale horny, pyramidal, very finely striated; whorls eleven, gradually attenuated; aperture rather auriform, columellar lamina narrow, nearly vertical, margin white, thick, swelled above the middle of the outer lip.

MARTENS. — ?

Hab. Japan.

Species 91. (Mus. Brit.)

CLAUSILIA FLUVIATILIS. *Cl. testâ ventricosâ, solidâ, pyramidatâ, medio et infra inflatâ; pallidè fuscâ,*

tenuissimè striatâ, versus apicem attenuatâ; anfractibus undecenis, obliquis, convexis, ultimo infra carinata; aperturâ magnâ; labio interno crenulato, lamina columellari angustâ, elevatâ, ferè perpendiculari; labio interno in tuberculum dentiformem desinenti.

THE FLUVIATILE CLAUSILIA. Shell ventricose, solid, pyramidal, inflated in the middle and below; pale brown, very finely striated, attenuated towards the apex; whorls eleven, oblique, convex; last keeled below; aperture large, inner lip crenulated, columellar lamina narrow, raised, almost perpendicular; inner lip ending in a tooth-shaped tubercle.

BENSON. — ?

Hab. Chusan.

The last whorl is keeled at the bottom. In this and the preceding species the columellar lamina is closely pressed against the edge, and is almost perpendicular.

Species 92. (Mus. Brit.)

CLAUSILIA KOBENSIS. *Cla. testâ solidâ, ventricosâ, pyramidalâ, rubro-fuscâ, tenuissimè liratâ; anfractibus duodeccenis, obliquis, versus apicem attenuatis, infra medium convexis, ultimo ad terminum rotundo; aperturâ magnâ, margine albo, crasso, supra medium labii externi tumido; lamina columellari elongatâ, peculiariter arcuatâ, plicâ minori infra instructâ.*

THE KOBE CLAUSILIA. Shell solid, ventricose, pyramidal, red-brown, finely ridged; whorls twelve, oblique, attenuated towards the apex, convex below the middle, last rounded at the end; aperture large, margin white, thick, swelled above the middle of the outer lip; columellar lamina elongated, peculiarly arched, with a smaller inserted below.

SMITH. Quarterly Journal of Conchology.

Hab. Kobe, Japan.

Species 93. (Mus. Brit.)

CLAUSILIA VETUSTA. *Cla. testâ brevi, subventricosâ, fuscâ vel albâ, tenuissimè liratâ; anfractibus unde-*

ccenis, tribus inferioribus valdè inflatis; aperturâ parvâ, auriformi; lamina columellari prominenti, elevatâ, seminternâ.

THE ANTIQUATED CLAUSILIA. Shell short, subventricose, brown or white, very finely ridged; whorls eleven, three lower much inflated; aperture small, auriform, columellar lamina prominent, raised, half internal.

ZEIGLER. Pfeiffer. Mon. Helic. VI. 499.

Hab. Illyria.

Species 94. (Mus. Brit.)

CLAUSILIA ACULES. *Cla. testâ subfusiformi, corned, tenuissimè striatâ; anfractibus decenis, superioribus attenuatis, rectiusculis, inferioribus inflatis; aperturâ simplici, margine angustè incrassato, lamina columellari perelevatâ, parvâ.*

THE NEEDLE CLAUSILIA. Shell subfusiform, horny, very finely striated; whorls ten, upper attenuated, rather straight, lower inflated; aperture simple, margin narrowly thickened, columellar lamina much raised, small.

BENSON. Pfeiffer. Mon. Helic. VI. p. 482.

Hab. China.

Species 95. (Mus. Brit.)

CLAUSILIA OLYMPICA. *Cla. testâ parvâ, fusiformi, fulvâ, tenuissimè striatâ; anfractibus duodeccenis, superioribus attenuatis, medianis inflatis, ultimo elongato, soluto, tortuo, profundè rimato; aperturâ auriformi, subquadrato, margine incrassato, lamina columellari nullo.*

THE OLYMPIC CLAUSILIA. Shell small, fusiform, fulvous, very finely striated; whorls twelve, upper attenuated, middle inflated, last lengthened, unwound, twisted, deeply notched; aperture ear-shaped, rather square, margin thickened, columellar lamina none.

FRIVOLDT. Pfeiffer. Mon. Hel. VI. p. 514.

Hab. The Olympic Mountain.

A tortuous swelling of the part above the mouth is remarkable in this species.



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CLAUSILIA.

PLATE XI.

Species 96. (Mus. Brit.)

CLAUSILIA DAICICA. *Cl. testā ventricosā, succinea et plumbeā, levigatā; anfractibus duodecim, ultimo angustato, dorso rugato; aperturā oblongā, posticē angustatā; labio externo superne sinuato, margine supra medianā tumido, lamina columellari, magno, lamine internis inconspicuis.*

THE DACIAN CLAUSILIA. Shell ventricose, amber and plum, smooth; whorls eleven, last narrow, wrinkled at the back; aperture oblong, posteriorly narrowed; outer lip sinuous above, margin tumid above the middle, columellar lamina large, inner laminae inconspicuous.

FRIVALDSKY. Pfeiffer. Mon. Hel. VI. p.

Hab. Serbia.

Species 97. (Mus. Brit.)

CLAUSILIA SULCOSA. *Cl. testā angustatā, subpyramidalē; anfractibus undecim, obsolete costellis rectiusculis livatis; ultimo elongato, dorso infra sulcato, carinato; aperturā magnā, lamine columellaribus duabus, superiori obliquā, inferiori brevi, prominenti.*

THE GROOVED CLAUSILIA. Shell narrow, rather pyramidal; whorls eleven, obsolete ridged with small rather straight ribs, last elongated, back grooved and keeled below; aperture large, columellar laminae two, upper oblique, lower short, prominent.

WAGNER. Pfeiffer. Mon. Helic. VI. p. 499.

Clausilia irregularis. Zeigler.

Hab. Dahmatia.

Species 98. (Mus. Brit.)

CLAUSILIA SOMCHETICA. *Cl. testā brevi, ventricosā, fere levigatā; pullilē coracā; anfractibus undecim, medianis latis; aperturā subquadratā, lamina columellari nullā, lamina parietali brevi; labio externo sinuato.*

THE SOMCHETICA CLAUSILIA. Shell short, ventricose, almost smooth, pale horn; whorls eleven, middle white; aperture subquadrate, columellar lamina

none, parietal lamina short, outer lip sinuous above.

PFEIFFER. Mon. Helic. VI. p. 446.

Hab. ———?

Species 99. (Mus. Brit.)

CLAUSILIA FRAUENFELDTI. *Cl. testā elongato-fusiformi, fuscā, levigatā; anfractibus decem, medianis et inferioribus inflatis, ad suturam albo angustē fasciatis; ultimo elongato, angustato; aperturā pyriformi, expansā, castaneā; labio externo supra medianū tumido, lamina columellari lato.*

FRAUENFELDT'S CLAUSILIA. Shell elongate-fusiform, brown, smooth; whorls ten, middle and lower inflated, narrowly banded with white at the suture, last elongated, narrow; aperture pyriform, expanded, chestnut; outer lip tumid above the middle, columellar lamina broad.

ZELEBOR. Pfeiffer. Mon. Helic. VI. p. 440.

Hab. Serbia.

Species 100. (Mus. Brit.)

CLAUSILIA PAGANA. *Cl. testā parvā, brevi, fusiformi, obscure fuscā, tenuissimē striatā; anfractibus decem, apicali rotundo, superioribus attenuatis, inferioribus subventricosi; aperturā auriformi, margine crasso, labio externo supra medianū sinuato, tumido, lamina columellari interne extensa.*

THE PAGAN CLAUSILIA. Shell small, short, fusiform, dull brown, very finely striated; whorls ten, apical round, upper attenuated, lower rather ventricose; aperture auriform, margin thick, outer lip sinuous above the middle, tumid, columellar lamina extended within.

ZEIGLER. Pfeiffer. Mon. Helic. VI. p. 505.

Hab. Serbia.

Species 101. (Mus. Brit.)

CLAUSILIA SEMIDENTICULATA. *Cl. testā breviusculā, fusiformi, plumbeā, levigatā, apice succineā; anfractibus undecim, medianis ventricosi, ultimo ad dorsum elongato, soluto, tortuo, medio sulcato;*

CLAUSILIA.—PLATE XI.

aperturâ succineâ, labio externo, supernè emarginato, supra medium sinuatâ tumido, margine crenulato; columellâ infra lamina triplicato.

THE HALF-DENTICULATED CLAUSILIA. Shell rather short, fusiform, plum, smooth, apex amber; whorls eleven, middle ventricose, last elongated at the back, unwound, tortuous, with a groove in the middle; aperture amber, outer lip emarginated, sinuously tumid above the middle, margin crenulated; columella triplicate below the lamina.

PFEIFFER. Mon. Helic. VI. p. 509.

Hab. Turkey; on the banks of the Bosphorus.

Species 102. (Mus. Brit.)

CLAUSILIA FORTUNEL. *Cla. testâ elongato-fusiformi, solidâ, obscurè plumbeâ, tenuissimè striatâ; anfractibus quaterdecenis, superioribus attenuatis, medianis et inferioribus ventricosis; ultimo elongato, medio compresso; aperturâ magnâ, auriformi, succineâ, margine albo, crasso, lamina columellari magnâ, crassâ, margine columellari medio sinuato.*

FORTUN'S CLAUSILIA. Shell elongated-fusiform, solid, dull plum, very finely striated; whorls fourteen, upper attenuated, middle and lower ventricose; last elongated, middle compressed; aperture large, ear-shaped, amber, margin white, thick; columellar lamina large, thick, columellar margin sinuous in the middle.

PFEIFFER. Mon. Helic. VI. p. 494.

Hab. Shanghai.

Species 103. (Mus. Brit.)

CLAUSILIA BERGERI. *Cla. testâ subfusiformi, fusco-plumbeâ, levi; anfractibus undecenis, medianis ventricosis, ultimo elongato, birugato; aperturâ*

subtrigonâ, labio externo suprà infrâque acuminato.

BERGER'S CLAUSILIA. Shell subfusiform, brown-plum, smooth, whorls eleven, middle ventricose, last elongated, with two wrinkles; aperture rather trigonal, outer lip acuminated above and below.

MAYER. Pfeiffer. Mon. Helic. VI. p. 422.

Hab. Bavaria.

Remarkable for the peculiar triangular form of the mouth.

Species 104. (Mus. Brit.)

CLAUSILIA SERICATA. *Cla. testâ brevi, fusiformi, ventricosâ, levi, fusco-plumbeâ; apice et aperturâ succineâ; aperturâ magnâ, margine expanso; lamina columellari lato, elevato, laminis internis quaternis.*

THE SILKEN CLAUSILIA. Shell short, fusiform, ventricose, smooth, brown-plum, apex and aperture amber; aperture large, margin expanded; columellar lamina broad, raised, four internal laminae.

PFEIFFER. Mon. Helic. VI. p. 492.

Hab. Eubœa.

Species 105. (Mus. Brit.)

CLAUSILIA LEROSIENSIS. *Cla. testâ obscurè plumbeâ, acutè et crebrè laminatâ, subfusiformi, anfractibus undecenis, apicalibus levigatis, medianis ventricosis, ultimo elongato, ad dorsum costis distantibus lirato; aperturâ triplicatâ, auriformi.*

THE LEROS CLAUSILIA. Shell dull plum, sharply and closely laminated, rather fusiform; whorls eleven, apical smooth, middle ventricose, last elongated, ridged on the back with distant ribs; aperture with three plaits, auriform.

FERRUSSAC. — ?

Hab. Island Leros.



107.



108.



108.



110.



109.



111.



112.



113.



114.



115.

CLAUSILIA.

PLATE XII.

Species 106. (Mus. Brit.)

CLAUSILIA EXILIS. *Cla. testâ pupæformi, fuscâ, tenuissimè liratâ; anfractibus novenis, medianis subæqualibus, ultimo contracto; aperturâ parvâ, margine externo superius flexuosius tumido, margine interno prope suturam biplicatâ, plicâ columellari nullâ, laminis semiinternis intus productis.*

THE NARROW CLAUSILIA. Shell pupa-shaped, brown, very finely ridged; whorls nine, middle nearly equal, last contracted, aperture small, outer margin with a tumid hand above, inner margin with two plaits near the suture, no columellar plait, internal plaits extended within.

LOWE. Proc. Zool. Soc. 1866, p. 307.

Hab. Madeira.

Species 107. (Mus. Brit.)

CLAUSILIA BELCHERI. *Cla. testâ fusiformi, levigatâ, altâ, fusco-stramineâ; anfractibus decenis, convexis, supra medium attenuatis, medio inflatis, ultimo supra aperturam elongato; aperturâ subauriformi, superius sinuatâ, plicâ columellari magnâ, elevatâ.*

BELCHER'S CLAUSILIA. Shell fusiform, smooth, raised, brown-straw; whorls ten, convex, attenuated above the middle, inflated at the middle, last lengthened above the aperture; aperture rather ear-shaped, sinuated above, columellar fold large, elevated.

PFEIFFER. Mon. Hel. Vol. VI. p. 412.

Hab. Korean Archipelago.

Species 108. (Mus. Brit.)

CLAUSILIA CLAVIFORMIS. *Cla. testâ breviter fusiformi, levissimâ, fusco-stramineâ; anfractibus octonis, convexis, infra medium inflatis, ultimo subortuoso; aperturâ perpendiculariter oblongâ; labio interno biplicato, plicis parvis.*

THE KEY-SHAPED CLAUSILIA. Shell shortly fusiform, very smooth, brown-straw; whorls eight, convex, inflated below the middle, last rather tortuous; aperture perpendicularly oblong, inner lip with two folds, folds small.

PFEIFFER. Mon. Hel. Vol. VI., p. 412.

Hab. Korean Archipelago.

Much resembling *Clausilia Belcheri*, but shorter and more ventricose.

Species 109. (Mus. Brit.)

CLAUSILIA RUDIS. *Cla. testâ pallidè fuscâ, fusiformi, laminatim liratâ, liris crassis, subdistantibus; anfractibus undecenis, supra medium longè attenuatis, medio et infra valdè inflatis, ultimo infra subcontracto; aperturâ oblongâ, subquadratâ, plicis labii interni parvis.*

THE ROUGH CLAUSILIA. Shell pale fawnous, fusiform, laminately ridged, ridges thick, rather distant; whorls eleven, attenuated some length above the middle, much inflated at the middle and under, last somewhat contracted below; aperture oblong, rather square, folds of the inner lip small.

PFEIFFER. Proc. Zool. Soc. Lond. 1864.

Hab. Island of Crete.

Species 110. (Mus. Brit.)

CLAUSILIA PETROSA. *Cla. testâ altâ, leviter liratâ, subfusiformi, cornèâ; anfractibus duodecenis, superioribus brevibus, attenuatis, inferioribus tribus altis, ultimo elongato, tortuo, obliquè producto; aperturâ auriformi, margine albo, crasso, labio interno calidè biplicato, labio externo supra medium tumido.*

THE STONY CLAUSILIA. Shell high, slightly ridged, subfusiform, horny; whorls twelve, upper short, attenuated, lower three high, last elongated, tortuous, obliquely produced; aperture ear-shaped, margin white, thick, inner lip with two strong folds, outer lip swelled above the middle.

PARREYS. Küster, p. 226.

Hab. Greece.

The aperture is curiously twisted and brought round, so as to project on the right side.

Species 111. (Mus. Brit.)

CLAUSILIA IDE. *Cla. testâ subfusiformi, solidâ, latâ, pruinosa, laminis fulvis numerosis, rectiusculis, tenuibus lirata; aperturâ magnâ, subquadratâ, prope suturam sinuatâ, tumidâ, plicâ parietali parvâ, laminâ columellari mediocri.*

THE MOUNT IDA CLAUSILIA. Shell subfusiform, solid, broad, plum-colour, ridged with fulvous, numerous, rather straight, thin laminae; aperture large, rather square, sinuated and tumid near the suture; parietal plait small, columellar lamina middle-sized.

PFEIFFER. Mon. Vol. VI. p. 498.

Hab. Mount Ida.

Species 112. (Mus. Brit.)

CLAUSILIA DISTANS. *Cla. testâ fusiformi, elongatâ, lacteâ, angustâ, distanter lirata; anfractibus quaterdecenis, superioribus attenuatis, medianis et inferioribus latiusculis, ultimo breviter rinato, declivi, aperturâ perpendiculariter oblongâ, superne attenuatâ, margine albo, columellâ rectiusculâ, laminâ columellari oblique dentiformi.*

THE DISTANT CLAUSILIA. Shell fusiform, elongated, cream-coloured, narrow, distantly ridged; whorls fourteen, upper attenuated, middle and lower rather wide, last shortly notched, sloped down; aperture perpendicularly oblong, attenuated above, margin white, columella rather straight, columellar lamina obliquely tooth-shaped.

PFEIFFER. Proc. Zool. Soc. 1864, p. 605.

Hab. Sudsuro, Crete.

Species 113. (Mus. Brit.)

CLAUSILIA COMPRESSA. *Cla. testâ regulariter fusiformi, lilaceâ, strigis brevibus, fuscis variegatâ, tenuiter laminatim lirata; anfractibus decenis, superioribus parvis, ultimo elongato; aperturâ perpendiculariter oblongâ, labio externo prope medium sinuatim tumido, plicâ parietali parvâ, plicâ columellari prominenti.*

THE COMPRESSED CLAUSILIA. Shell regularly fusiform, lilac, variegated with short brown stripes, ridged with fine laminae; whorls ten, upper

small, last elongated; aperture perpendicularly oblong, outer lip sinuously tumid near the middle, parietal fold small, columellar fold prominent.

PFEIFFER. Mon. Hel. Vol. VI. p. 428.

Hab. Island of Cerigo.

Species 114. (Mus. Brit.)

CLAUSILIA SCALARIS. *Cla. testâ, brevi, latâ, fulvâ, tenuiter laminatim lirata; anfractibus senis, prope suturam latioribus angulatis, ultimo altâ, infra contracto; aperturâ auriformi, columellâ infra retrorsim expansâ, labio externo supra medium sinuatim tumido, plicâ parietali parvâ, plicâ columellari medioeri, obliquâ.*

THE LADDER-LIKE CLAUSILIA. Shell short, broad, fulvous, with fine laminar ridges; whorls six, broader and angular near the suture, last high, contracted below; aperture auriform, columella expanded backwards below, outer lip sinuously tumid above the middle, parietal fold small; columella fold middling, oblique.

PFEIFFER. Mon. Hel. Vol. VI. p. 439.

Hab. Malta.

The whorls are angularly shouldered, so as to give the appearance of steps.

Species 115. (Mus. Brit.)

CLAUSILIA HAERI. *Cla. testâ breviusculâ, pyramidato-subfusiformi, latâ, distanter tenuiter lirata, inter liras pruinosa; anfractibus decenis, inferioribus magnis; aperturâ auriformi, margine crasso, albo, labio externo supra medium tumido, plicâ parietali minutâ, plicâ columellari altissimâ, fere perpendiculari.*

HAERI'S CLAUSILIA. Shell rather short, pyramidally subfusiform, broad, distantly finely ridged, plum-coloured between the ridges; whorls ten, lower large; aperture auriform, margin thick, white, outer lip tumid above the middle, parietal fold minute, columellar fold very high, almost perpendicular.

BIELZ. Pfeiffer, in Novit. Conch. Fasc. XXII. p. 264.

Hab. Transylvania.



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118



120



119



121



122



123



124



125

CLAUSILIA.

PLATE XIII.

Species 116. (Mus. Brit.)

CLAUSILIA LIVEUS. *Cla. testâ dextrali, pruinoso-fusca, breviusculâ, fusiformi; anfractibus octonis, altis, inferioribus subinflatis, ultimo contracto, obliquo; aperturâ auriformi, infra oblique productâ, margine crasso, albo, plicâ columellari magnâ, plicâ parietali parvâ, labio externo ad medium late tumido.*

THE LIVID CLAUSILIA. Shell dextral, plum-brown, rather short, fusiform; whorls eight, high, rather inflated, last contracted, oblique; aperture ear-shaped, obliquely produced below; margin thick, white, columellar plait large, parietal plait small, outer lip broadly tumid at the middle.

BIELZ. Pfl. Vol. IV. p. 718.

Clausilia Lischkeana. Bielz.

Hab. Transylvania.

Species 117. (Mus. Brit.)

CLAUSILIA RADIA. *Cla. testâ parvâ, breviusculâ, subfusiformi, olivaceo-fusâ, brevi; anfractibus octonis; aperturâ suboblique ovatâ, plicâ columellari magnâ, elevatâ, plicâ parietali parvâ.*

THE RAY CLAUSILIA. Shell small, rather short, subfusiform, olive-brown, smooth; whorls eight; aperture rather obliquely oval, columellar plait large, raised, parietal plait small.

ZEIGLER. Pfeiffer. Vol. VI. p. 496.

Clausilia fontana. Schmidt.

Clausilia cruda. Schmidt.

Hab. —?

Species 118. (Mus. Brit.)

CLAUSILIA SCHMIDTI. *Cla. testâ parvâ, fusiformi, politâ, pruinosa; anfractibus duodeccenis, superioribus parvis, mediis et inferioribus subinflatis, ultimo infra subcontracto; aperturâ subaurantiâ, oblongâ, labio externo supra medium sinuatim tumido, plicâ columellari productâ, plicâ parietalibus duabus.*

SCHMIDT'S CLAUSILIA. Shell small, fusiform, polished, plum-coloured; whorls twelve, upper small, middle and lower somewhat inflated, last a

little contracted below; aperture rather orange, oblong, outer lip sinuously tumid, columella plait produced, parietal plaits two.

PFEIFFER. Mon. Hel. Vol. VI. p. 490.

Hab. Carinthia.

Species 119. (Mus. Brit.)

CLAUSILIA PERARATA. *Cla. testâ latâ, brevi, fusoso-fusâ, longitudinaliter, peroblique costatâ; anfractibus senis, ultimo et penultimo altissimis, ultimo infra contractâ et prolongatâ; aperturâ depressâ, subrotundâ, auriformi; margine ad columellam oblique expanso; plicâ parietali prominenti; plicâ columellari crassâ.*

THE PLOUGHED CLAUSILIA. Shell broad, short, smoky-brown, longitudinally very obliquely ribbed; whorls six, last and last but one very high, last contracted below and prolonged; aperture depressed, rather round, ear-shaped; margin obliquely expanded at the columella; parietal plait prominent; columellar plait thick.

MARTINI. —?

Hab. New Granada.

Species 120. (Mus. Brit.)

CLAUSILIA TERES. *Cla. testâ angustâ, altissimâ, levigatâ, lilacâ; anfractibus septendecenis, superioribus valde attenuatis, inferioribus altis, subinflatis; aperturâ aurantiâ, perpendiculariter oblongâ, labio externo, supra medium tumidâ; plicâ columellari obliquâ, elevatâ, plicâ parietali parvâ, acutâ.*

THE ROLLING-PIN CLAUSILIA. Shell narrow, very high, smooth, lilac; whorls seventeen, upper very attenuated, lower high, subinflated; aperture orange, perpendicularly oblong, outer lip tumid above the middle, columellar plait oblique, raised; parietal plait small, sharp.

OLIVIER. (Bulimus.) Pfl. Mon. Hel. Vol. II. p. 414.

Hab. Crete.

Species 121. (Mus. Brit.)

CLAUSILIA SIEROLDI. *Cla. testâ breviusculâ, fusiformi, supernè succineâ, infra pruinosa, levigatâ; an-*

fractibus novenis, superioribus subattenuatis, medianis inflatis; aperturâ magnâ, auriformi; margine albo, crasso, labio externo supra medium tumido, plicâ parietali brevi, acutâ, plicâ columellari prominenti.

SIEBOLDT'S CLAUSILIA. Shell rather short, fusiform, amber above, plum-coloured below, smooth; whorls nine, upper rather attenuated, middle inflated; aperture large, ear-shaped; margin white, thick, outer lip tumid above the middle, parietal plait short, sharp; columella plait prominent.

PFEIFFER. Malak. Bl. 1869.

Hab. Japan.

Species 122. (Mus. Brit.)

CLAUSILIA MARONHONENSIS. *Cla. testâ brevi, latâ, subcylindricâ, levigatâ, albâ et pallidâ fuscâ; anfractibus senis, altis, ultimo infrâ subcontracto, prolongato, profundè et obliquè rimato; aperturâ rotundo-auriformi, margine albo, expanso, superiôrè rimato, plicâ parietali prominenti; plicâ columellari parvâ, altissimâ.*

THE MARANHON CLAUSILIA. Shell short, broad, rather cylindrical, smooth, white and pale fulvous; whorls six, high, last rather contracted below, prolonged, deeply and obliquely notched; aperture roundly-auriform; margin white, expanded, notched above; parietal plait prominent, columellar plait small, very high.

ALBERS. Pfeiffer. Mon. Hel. IV. p. 785.

Hab. River Maranhon, Colombia.

Species 123. (Mus. Brit.)

CLAUSILIA CORTICINA. *Cla. testâ altâ, subpyramidatâ, levigatâ, pruinosâ; anfractibus novenis, inferioribus altis, ultimo prolongato; aperturâ maximâ, superiôrè subacuminatâ, prope suturam sinuatim emarginatâ; plicâ parietali tenui, plicâ columellari altâ, parvâ, columellâ arcuatâ.*

THE RIND CLAUSILIA. Shell high, rather pyramidal, smooth, plum-coloured; whorls nine, lower high, last prolonged; aperture very large, rather acuminate above, sinuously emarginated near the suture; parietal plait thin, columellar plait high, small, columella plait curved.

VON BUSCH. Pflr. Mon. Hel. II. p. 404.

Hab. Java.

Species 124. (Mus. Brit.)

CLAUSILIA KUTSCHIGI. *Cla. testâ brevi, ventricosissimâ, lilaciâ, levigatâ; anfractibus octonis, tribus inferioribus altis, inflatis, ultimo subcontracto, ad dorsum plicato; aperturâ magnâ, latâ, margine crasso, plicis parietali et columellari acuminatis, prominentibus.*

KUTSCHIG'S CLAUSILIA. Shell short, very ventricose, lilac, smooth; whorls eight, three lower high, inflated, last a little contracted, plaited at the back; aperture large, broad; margin thick, parietal and columellar plaits acuminate, prominent.

KESTER, p. 274.

Clausilia costicollâ. Parr.

Clausilia corpulentâ. Kutschig.

Hab. Dalmatia.

Species 125. (Mus. Brit.)

CLAUSILIA CASTALIA. *Cla. testâ subpyramidatâ, superiôrè attenuatâ, medio et infrâ inflatâ, fuscâ, levi, anfractibus novenis, inflatis; aperturâ parvâ, obliquè subproductâ, superiôrè acuminatâ; margine crasso, plicâ columellari altâ.*

THE CASTALIA CLAUSILIA. Shell rather pyramidal, attenuated above, inflated in the middle and below; brown, smooth; whorls nine, inflated; aperture small, a little obliquely produced, acuminate above; margin thick, columellar plait high.

ROTH. Rossmäslcr, Icon. III. p. 54.

Hab. Mount Parnassus.



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132



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135



134

CLAUSILIA.

PLATE XIV.

Species 126. (Mus. Brit.)

CLAUSILIA CONTAMINATA. *Cla. testā brevissimā, latā, brevitatā, lilacinā; anfractibus senis; aperturā latā, subquadratā, subaureā, plicis nullis.*

THE CONTAMINATED CLAUSILIA. Shell very short, broad, smooth, lilac; whorls six; aperture broad, rather square, rather golden-tinted; no plaits.

ZEIGLER. Pfeiffer. Mon. Hel. II. 436.

Hab. Cephalonia.

Species 127. (Mus. Brit.)

CLAUSILIA MADENSIS. *Cla. testā dextrali, pyramidalē, brevis, coracē et pruinosa, brevis; anfractibus novenis, superioribus angustis, inferioribus ventricosius; aperturā obliquā, auriformi, supernē angustatā; plicā columellari prominenti, plicā parietali elongatā.*

THE MADEN CLAUSILIA. Shell dextral, pyramidal, short, horny, plum-coloured, smooth; whorls nine, upper narrow, lower ventricose; aperture oblique, ear-shaped; narrow above; columellar fold prominent, parietal fold lengthened.

F. S. NICHOL. — ?

Hab. Transylvania.

Species 128. (Mus. Brit.)

CLAUSILIA CANALICULATA. *Cla. testā brevis, pyramidalē, anfractibus decenis, inferioribus latis; aperturā latā, subaureā, subrotundā, prope suturā canaliculatā, sinuatā, margine crasso, plicā columellari elevatā, latā.*

THE CHANNELLED CLAUSILIA. Shell short, pyramidal, whorls eight, lower broad; aperture broad, rather golden, rather rounded, channelled near the suture, sinuated, margin thick, columellar plait raised, broad.

PFEIFFER. Mon. Hel. III. 599.

Clausilia Euboea. Parreys.

Hab. Euboea.

Species 129. (Mus. Sowerby.)

CLAUSILIA REINIANA. *Cla. testā magnā, solidā, subfusiformi, latā, fuscā, tenuissimē striatā; anfractibus decenis, apicalibus quaternis brevibus, rotundis, medianis magnis, inflatis, ultimo maximo, infra contracto; aperturā magnā, subauriformi, subaurantiā; plicā parietali angustā, plicā columellari parvā, planatā, subelevatā, plicā minutā, infra columellam tenui.*

THE REINI CLAUSILIA. Shell large, solid, subfusiform, broad, brown, very finely striated; whorls ten, four apical short, round, middle large, inflated, last very large, contracted below; aperture large, subauriform, rather orange; parietal fold narrow, columellar plait small, flattened, rather raised; minute plait below the columella small.

KOEFEL. — ?

Hab. Japan.

Species 130. (Mus. Brit.)

CLAUSILIA STRACUSANA. *Cla. testā subfusiformi, pallidē fulvā, lunulis acutis rectis crebris latis; anfractibus decenis, apicalibus quaternis parvis, rotundis, brevibus; aperturā subovatā, margine expanso, albā; labio externo, supernē tumido, dentato, dente internē continuo, plicā parietali minutā, plicā columellari crassā, elevatā; plicā subinternā obliquā, ad marginem inferiorem desinenti.*

THE STRACUSE CLAUSILIA. Shell subfusiform, pale fulvous, ridged with numerous sharp, straight laminae; whorls ten, four apical small, rounded, smooth; aperture rather ovate, margin white, expanded; outer lip tumid above, toothed, inner lip continuous, parietal plait minute, columellar plait thick, raised; a subinternal oblique plait ending at the lower margin.

PHILIPPI. Pfeiffer. Mon. Hel. IV. 739.

Clausilia macrostoma. Cautraïne.

Clausilia inflata. Delle Chiaje.

Hab. Sicily.

Species 131. (Mus. Brit.)

CLAUSILIA SICULA. *Cla. testā breviusculā, pallidā, latā, levigatā, medio et infus ventricosā; anfractibus paucis, tenuissimē striatis, fusco strigatis, ultimo elongato; aperturā obliquā, subauriformi, labio externo crasso, infus subexpansā, columellā triplicatā.*

THE SICILIAN CLAUSILIA. Shell rather short, pale, broad, smooth, ventricose in the middle and below; whorls few, very finely striated, striped with brown, last elongated; aperture oblique, rather auriform, outer lip thick, expanded below, columella three-plaited.

BENOÎT. — ?

Hab. Sicily.

Species 132. (Mus. Brit.)

CLAUSILIA REGILABRIS. *Cla. testā subfusiformi, brevi, levi, cornet et pruinosa; anfractibus apicalibus parvis, rotundis; aperturā latā, margine crasso, albo, labio externo superius tumido, sinuato; plicā parietali acutā; columellā biplicatā.*

THE ROUGH-LIPPED CLAUSILIA. Shell subfusiform, short, smooth, horny and plum-coloured; apical whorls small, round; aperture broad, margin thick, white, outer lip tumid above, sinuous; parietal fold sharp; columella with two plaits.

MOUSSON. Pfeiffer. Mon. Hel. VI. p. 475.

Hab. Near Janina, Greece.

Having a singularly broad and thick-lipped mouth.

Species 133. (Mus. Brit.)

CLAUSILIA STRAMINICOLLIS. *Cla. testā pruinosa, fusiformi, levi, infus medium subventricosā; anfractibus novenis, stramineo ad suturam tenuatis; aperturā aurantiā, oblongā, posticē angustatā et attenuatā, labio interno biplicato.*

THE STRAW-NECKED CLAUSILIA. Shell plum-coloured, fusiform, smooth, ventricose below the middle;

whorls nine, with a straw-coloured band at the suture; aperture orange, oblong, posteriorly narrow and attenuated, inner lip with two plaits.

PARREYS. Küster, Claus. p. 341.

Hab. Transylvania.

Species 134. (Mus. Sowerby?)

CLAUSILIA CALCAREA. *Cla. testā brevi, fusiformi, levigatā, cornet; anfractibus undecenis, medianis et inferioribus altis, ventricosis; aperturā magnā, margine crasso; plicā parietali parvā, plicā columellari elevatā, plicā subinternā infus prope columellam curvā.*

THE CALCAREAN CLAUSILIA. Shell short, fusiform, smooth, horny; whorls eleven, middle and lower high, ventricose; aperture large, margin thick; parietal plait small, columellar plait raised, subinternal plait curved below near the columella.

PHILIPPI. Pfeiffer. Mon. Hel. II. 453.

Clausilia assimilis. Zeigler.

Hab. Sicily.

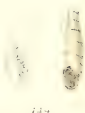
Species 135. (Mus. Brit.)

CLAUSILIA BILABIATA. *Cla. testā subfusiformi, fulvā, tenuiter striatā; anfractibus paucis, inferioribus convexis, ventricosis; aperturā subovatā, prope suturam subacuminatā; labio externo crasso, supra medium tumido, extus duplicato; columellā quadruplicatā, plicā superiori brevi, latā, plicā parietali productā.*

THE DOUBLE-LIPPED CLAUSILIA. Shell subfusiform, fulvous, finely striated; whorls few, lower convex, ventricose; aperture subovate, slightly acuminate near the suture; outer lip thick, tumid above the middle, double outside; columella with four plaits, upper plait short, broad, parietal plait produced.

SMITH. Proc. Zool. Soc.

Hab. Japan.



CLAUSILIA.

PLATE XV.

Species 136. (Mus. Brit.)

CLAUSILIA FILOGRANA. *Cl. testâ parvâ, fusiformi, pruinosa, tenuiter liscâ, iris filiformibus; aperturâ pallidâ aurantiâ, parvâ, columellâ medio latè plicatâ, plicâ inferiori minutâ, plicâ parietali inconspicuâ, labio externo superiôr acuminatâ, sinuato.*

THE THREAD-GRAINED CLAUSILIA. Shell small, fusiform, plum-coloured, finely ridged, ridges thread-like; aperture pale orange, small, columella broadly plaited in the middle, lower plait minute, parietal plait inconspicuous, outer lip acuminate above, sinuous.

ZEIGLER. Pfl. Mon. Hel. II. p. 499.

Clausilia interrupta. —?

Hab. Silesia, Croatia, Austria.

Species 137. (Mus. Brit.)

CLAUSILIA AQUILA. *Cl. testâ brevi, latâ, loricatâ, superiôr angustatâ, infôr ventricosâ, pallidè libidinâ; aperturâ maximâ, aurantiâ; margine crasso, plicâ columellari magnâ, prominenti.*

THE EAGLE CLAUSILIA. Shell short, broad, smooth, narrow above, ventricose below, pale like; aperture very large, orange; margin thick, columella large, prominent.

PARREYS. Rossmâler, Icon. III. p. 43.

Hab. Dalmatia.

Species 138. (Mus. Brit.)

CLAUSILIA CANA. *Cl. testâ brevi, ventricosâ, fusiformi, striatâ, fuscâ, nunctis densioribus variegatâ; anfractibus nunctis, superioribus attenuatis; aperturâ auriformi, plicâ parietali ad suturam approximâtâ, plicâ columellari latè laminatâ.*

THE HOARY CLAUSILIA. Shell short, ventricose, fusiform, striated, brown, varied with darker coloured spots; whorls nine, upper attenuated; aperture ear-shaped, parietal plait near the suture, columellar plait broadly laminar.

HELDEMAN. Kùst. p. 133.

Clausilia tessellata. Parreys?

Species 139. (Mus. Brit.)

CLAUSILIA STIGMATICA. *Cl. testâ brevissimâ, ventricosâ, levi; anfractibus medianis et inferioribus inflatis, ad suturam tuberculis parvis albis oratis; aperturâ subquadratâ, magnâ, labio interno bispicato, superiôr interrupto.*

THE STIGMATIC CLAUSILIA. Shell very short, ventricose, smooth, middle and lower whorls inflated, ornamented at the suture with small white tubercles; aperture rather square, large, inner lip two-plaited, interrupted above.

ZEIGLER. Pfl. Mon. Hel. II. 424.

Hab. Dalmatia.

Species 140. (Mus. Brit.)

CLAUSILIA BUSCHI. *Cl. testâ brevi, pyramidalâ, pallidè cornè, levi, semipellucidâ; anfractibus nunctis, convexis; aperturâ parvâ, auriformi, plicis parietali et columellari parvis.*

BUSCH'S CLAUSILIA. Shell short, pyramidal, pale horny, smooth, semipellucid; whorls nine, convex; aperture small, auriform, parietal and columellar plaits small.

KÛSTER. Martens in Malak. Bl. VII.

Hab. Japan.

Species 141. (Mus. Brit.)

CLAUSILIA BORNEENSIS. *Cl. testâ altâ, pyramidalâ, fuscâ; anfractibus decem, inflatis; aperturâ aurantiâ, auriformi, tortuosim versus latas dextrum productâ, superiôr acuminatâ, margine crasso, labio interno bispicato.*

THE BORNEAN CLAUSILIA. Shell high, pyramidal, brown; whorls ten, inflated; aperture orange, ear-shaped, tortuously bent back towards the right side, acuminate above, margin thick, inner lip two-plaited.

PFEIFFER. Mon. Hel. IV. 736.

Hab. Borneo.

The mouth is peculiarly bent over towards the right side of the shell.

CLAUSILIA.—PLATE XV.

Species 142. (Mus. Brit.)

CLAUSILIA MACASCARIENSE. *Cla. testā lilacinā, subventricosā, pyramido-fusiformi; anfractibus decenis, inferioribus altis, latis, rectilateralibus, ultimo elongato, ad medium dorsi depresso, liris inaequalibus, irregularibus rugato; aperturā aurantiā, magnā, obliquā, subauriformi, superiū acuminatā, plicā parietali acutā productā, plicā columellari magnā, angulatim productā.*

THE MACASCAR CLAUSILIA. Shell lilac, subventricose, pyramidal, fusiform; whorls ten, lower high, broad, rectilateral, last elongated, depressed at the middle of the back, wrinkled with unequal irregular ridges; aperture orange, large, parietal plait sharply produced, columellar plait large, angularly produced.

SOWERBY.

Clausilia corrugata. Menke.

Clausilia Macarana. Zeigler.

Hab. Macascar.

Species 143. (Mss. Sowerby.)

CLAUSILIA DELESSETHI. *Cla. testā fusiformi, pruinosa, tenuissimē lirata; anfractibus undecenis, albo marginatis, obliquis; ultimo prope terminum ad dorsum depresso et subcarinato; aperturā prominenti, subovatā, margine albo, lato, reflexo, plicā columellari magnā, obliquē productā.*

DELESSETH'S CLAUSILIA. Shell fusiform, plum-coloured, finely ridged; whorls eleven, bordered

with white, oblique; last depressed or partly keeled near the end at the back; aperture prominent, subovate, margin white, broad, reflected, columellar plait large, obliquely produced.

BOURGUIGNAT. Mon. Hel. IV. 774.

Hab. Syria.

Figure 144. (Mus. Brit.)

CLAUSILIA FUNICULEM. Already given in Plate VIII. f. 71, and repeated here by error.

Species 145. (Mus. Brit.)

CLAUSILIA CALLOSA. *Cla. testā pruinosa, lamination tenuissimē lirata, elongata, angustissimā medio et infra rectilaterali; anfractibus decenis, altis, ultimo elongato, ad dorsum infra obliquē sulco impresso; aperturā auriformi, infra productā, margine crasso, plicā parietali minutā, plicā columellari obliquē acuminatā; altissimā, plicā internā conspicuā.*

THE CALLOUS CLAUSILIA. Shell plum-coloured, with fine laminar ridges, elongated, very narrow, straight-sided in the middle and below; whorls ten, high, last elongated, impressed at the back below with an oblique groove; aperture auriform, produced below, margin thick, parietal plait minute, columellar plait obliquely acuminate, very high; a conspicuous inner plait.

MUHLFELDT. Pfl. Mon. Hel. II. 419.

Hab. Dalmatia.



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CLAUSILIA.

PLATE XVI.

Species 146. (Mus. Sowerby.)

CLAUSILIA CINEREA. *Cla. testâ brevi, lœvi, subconvolutâ, anfractibus octonis, apicalibus quaternis fusconigrescentibus, medianis et inferioribus subventricosus, ultimo profundè rimato, aperturâ pallidè castaneâ, latâ, rotundâ, margine tenui, parâim reflectâ, plicâ columellari elevatâ, lineari, plicâ parietali suture approximâtâ, acutâ.*

THE ASHY CLAUSILIA. Shell short, smooth, bluish; whorls eight, four apical blackish brown, middle and lower rather ventricose, last deeply notched; aperture pale chestnut, broad, rounded, margin thin, a little reflected; columellar plait raised, linear parietal plait close to the suture, sharp.

PHILIPPI. A. Schmidt. Clausilia, p. 108.

Clausilia onivosa. Ziegler.

Clausilia terre. Delle Chiaje.

Hab. Naples.

Species 147. (Mus. Sowerby.)

CLAUSILIA COCHIN-CHINENSIS. *Cla. testâ breviusculâ, solidâ, fusco-grisâ, tenuissimâ, obliquè liratâ; anfractibus novenis, infusâ latâ, altâ, convexiusculâ, ultimo profundè rimato; aperturâ auriformi, pallidè carneâ, superne subacuminatâ, sinuatâ; margine crasso, cœleo, plicâ parietali parvâ, tenui, plicâ columellari magnâ, peelevatâ.*

THE COCHIN-CHINA CLAUSILIA. Shell rather short, solid, brownish-grey, very finely obliquely ridged; whorls nine, broad below, high, rather convex, last deeply notched; aperture auriform, pale flesh, rather acuminate above, sinuated; margin thick, reflected, parietal plait small, thin, columellar plait large, much raised.

PFEIFFER. Mon. Hel. VI. p. 443.

Hab. Cochinchina.

Species 148. (Mus. Sowerby.)

CLAUSILIA GOULDIANA. *Cla. testâ solidâ, pallidè fulvâ, lœvi, fusiformi, ventricosissimâ; anfractibus septenis, inferioribus altis, convexis, ultimo obliquè contracto, saturâ distinctâ; aperturâ latâ, labio externo albo, crasso, latè repleto, superne sinuatâ, submarginatâ, plicâ parietali prominenti, acutâ; plicâ columellari obliquâ, elevatâ, lineari.*

GOULD'S CLAUSILIA. Shell solid, pale fulvous, smooth,

fusiform, very ventricose; whorls seven, lower high, convex, last obliquely contracted, suture distinct; aperture wide, outer lip white, thick, broadly reflected, sinuous above, submarginate, parietal plate prominent, sharp; columellar plait oblique, elevated, linear.

PFEIFFER. Novil. Conch. p. 123.

Hab. Burmah.

Species 149. (Mus. Sowerby.)

CLAUSILIA TRISTRAMI. *Cla. testâ pruinosa, fusiformi, tenuissimè liratâ; anfractibus tridecimâ, superioribus brevibus, attenuatis, medianis et inferioribus ventricosus, ultimo dicaricatum impresso; aperturâ castaneâ, margine albo, plicis parietali et columellari tenuibus.*

TRISTRAM'S CLAUSILIA. Shell plum-coloured, fusiform, very finely ridged; whorls thirteen, upper smooth, attenuated, middle and lower ventricose, last impressed divergently; aperture chestnut, margin white, parietal and columellar folds thin.

PFEIFFER. Mon. Hel. VI. p. 481.

Hab. Tunis.

The former figure of this species, given in Plate V., was not so characteristic as the present, which, however, is only introduced by inadvertence.

Species 150. (Mus. Sowerby.)

CLAUSILIA RAYMONDI. *Cla. testâ fulvâ, inter costas pruinosa, costellis filiformibus liratâ, angustâ, rectilateriali, altâ; anfractibus decenis, medianis et inferioribus altis, ultimo infusâ contracto, prolongato, laevato, tortuo, ad dorsum obliquè bicarinato; aperturâ distantî, productâ, auriformi, margine tenui expanso, plicis parietali et columellari tenuibus, approximatis.*

RAYMOND'S CLAUSILIA. Shell fulvous, plum-coloured between the ribs, ridged with filiform ribs, narrow, straight-sided, high; whorls ten, middle and lower high, last contracted, prolonged, uncoiled, tortuous, obliquely bicarinated at the back; aperture distant, produced, ear-shaped, margin thin and expanded, parietal and columellar plaits thin, close together.

BOURGUIGNAT. Pfeiffer. Mon. Hel. VI. p. 513.

Hab. Syria.

CLAUSILIA.—PLATE XVI.

Species 151. (Mus. Sowerby.)

CLAUSILIA BOISSIERI. *Cla. testā subcervicē, fusiformi, breviusculā, laevigatā; anfractibus decenis, apicalibus fusco-nigrescentibus, medianis et inferioribus gradatim inflatis, ultimo prolongato, lirato, tortuo, lazato, carinis duabus convergentibus desinenti; aperturā latā, fulvā, productā, margine tenui, expanso, supernè sinuato, plicā parietali minūtā, plicā columellari altā, prominenti.*

BOISSIER'S CLAUSILIA. Shell blueish, fusiform, rather short, smooth; whorls ten, apical blackish-brown, middle and lower gradually inflated, last prolonged, ridged, tortuous, uncoiled, ending in two converging keels; aperture broad, fulvous, produced, margin thin, expanded, sinuous above, parietal plait minute, columellar plait high, prominent.

CHAPELIER. Pfr. Mon. Hel. p. 513.

Hab. Syria.

This species has a couple of wrinkled keels converging at the bottom of the last whorl.

Species 152. (Mus. Sowerby.)

CLAUSILIA VARIANS. *Cla. testā pallidē cornē, semipellucidā, tenuissimē liratā, tenui, subfusiformi, medio gradatim inflatā; aperturā subocatā, parvā, margine supernè sinuato emarginato, plicis parietali et columellari tenuibus, subapproximatis.*

THE VARYING CLAUSILIA. Shell pale horn, semipellucid, very finely ridged, thin, subfusiform, gradually swelled in the middle; aperture subovate, small, margin sinuously notched above, parietal and columellar plaits thin, rather approximate.

ZEIGLER. Pfr. Mon. Hel. II. p. 409.

Hab. Germany.

Species 153. (Mus. Sowerby.)

CLAUSILIA PROXIMA. *Cla. testā brevī, ventricosā, levī, subcervicē, apice aperturæque succineis; anfractibus octonis apicalibus parvis, medianis, inferioribusque latis, altis, inflatis; ultimo profundè rimato, ad dorsum perpendiculariter rugato; aperturā latā, subquadratā, margine tenui, reflexo, plicā parietali parvā, plicā columellari altā, latā.*

THE NEAR CLAUSILIA. Shell short, ventricose, smooth, blueish, apex and aperture amber; whorls eight, apical small, middle, lower broad, high, inflated; last deeply notched, perpendicularly wrinkled at the back; aperture broad, rather square, margin thin, reflected, parietal plait small, columellar plait high, broad.

WALDERDORFF. Syst. Verz. Call. 1864.

Hab. Cattar.

Species 154. (Mus. Sowerby.)

CLAUSILIA LUNELLARIS. *Cla. testā parvā, fulvā et pruinosa, brevī, tenuissimē striatā; anfractibus novenis, inferioribus inflatis, altis; ultimo rimato, ad dorsum maculā semilunari notato; aperturā fulvā, margine paulō expanso, supernè sinuato, emarginato, plicis parietali et columellari minutis, approximatis.*

THE LUNELLAR CLAUSILIA. Shell small, fulvous and plum-coloured, short, very finely striated; whorls nine, lower inflated, high, last notched, marked at the back with a semilunar spot, aperture fulvous, margin a little expanded, sinuous, emarginated, parietal and columellar plaits minute, near together.

PFEIFFER. Mon. Hel. III. p. 608.

Clausilia lunellaris by error, Pl. IV. 38.

Hab. Eubœa.

Species 155. (Mus. Sowerby.)

CLAUSILIA BLANDIANA. *Cla. testā brevī, sordidè pruinosa, tenuissimē striatā, subfusiformi; anfractibus septenis, suturā profundā separatis, convexis, ultimo altissimo, prolongato, profundè rimato, lazato, tortuo; aperturā magnā, castaneā, obliquè auriformi, trans latius dextrale extenso, expanso; plicā parietali prominenti, plicā columellari nullā.*

BLAND'S CLAUSILIA. Shell short, dull plum-colour, very finely striated, rather fusiform; whorls seven, separated by a deep suture, convex, last very high, prolonged, deeply notched, uncoiled, tortuous; aperture large, chestnut, obliquely auriform, extended across the right side, expanded, parietal plait prominent, no columellar plait.

PFEIFFER. Mon. Hel. IV. p. 785.

Hab. Santa de Bogota, Columbia.



CLAUSILIA.

PLATE XVII.

Species 156. (Mus. Sowerby.)

CLAUSILIA CERULEA. *Cla. testâ brevi, subcarnosa, laevi, fusiformi; anfractibus decem, medianis et inferioribus inflatis, apicalibus parvis, nigrescentibus, ultimo infra producto, angustato, rugato, ad dorsum tuberculato; aperturâ infus castaneâ, margine auro-fulvâ, obliquâ, margine tenui, re-*

THE BLUEISH CLAUSILIA. Shell short, bluish, smooth, fusiform; whorls ten, middle and lower inflated, apical small, blackish; last produced below, narrow, wrinkled, with two tubercles; aperture chestnut within, margin golden-fawn, oblique, margin thin, reflected.

FERRUSSAC. Kuster, p. 216.

Clausilia bicincta.

Hab. Morca.

Species 157. (Mus. Sowerby.)

CLAUSILIA DALMATINA. *Cla. testâ brevissimâ, ventricosi, pallidâ fulvâ, tenuissimâ striatâ; anfractibus octois, brevibus, ultimo alto, infra angustato, post marginem aperturæ marginato, dorso alto notato; aperturâ latâ, margine albo, expanso, plicâ columellari latâ.*

THE DALMATIAN CLAUSILIA. Shell very short, ventricose, pale fulvous, very finely striated; whorls eight, short, last high, narrow below, with a wrinkle behind the margin of the mouth; marked with white at the back, aperture broad, margin white, expanded, columellar plait broad.

PARTSCH. Pfeiffer. Mon. Hel. II. 432.

Clausilia marmorata. Zeigler.

Clausilia epidanica. Kutsch.

Hab. Dalmatia.

Species 158. (Mus. Brit.)

CLAUSILIA CRITICA. *Cla. testâ parvâ, tenuiter lineatâ, stramineâ, fusiformi; aperturâ subovatâ, superne sinuatâ, plicâ parietali suturâ approximâtâ, columellâ biplicatâ, labio externo supra medium sinuato.*

THE CRITICAL CLAUSILIA. Shell small, finely ridged, straw-coloured, fusiform; aperture subovate, sinuous above, parietal plait near the suture,

columella two-plaited, outer lip sinuated above the middle.

BIELTZ. Kuster, p. 263.

Hab. Transylvania.

Species 159. (Mus. Brit.)

CLAUSILIA DUROISI. *Cla. testâ parvâ, fulvâ, fusiformi, tenuiter laminatim lineatâ; aperturâ ovatâ, labio externo supra medium tumido, sinuato; columellâ infus plicam crenulatâ, plicis parietali et columellari ad terminus approximatis, plicâ parvâ intermediâ.*

DUROIS'S CLAUSILIA. Shell small, fulvous, fusiform, finely laminately ridged; aperture ovate, outer lip tumid and sinuous above the middle, columella crenulated below the plait, parietal and columellar plaits approximated at the ends with a small intermediate plait.

CHARPENTIER. Kuster, p. 270.

Hab. — ?

Species 160. (Mus. Sowerby.)

CLAUSILIA DISTANTILIRATA. *Cla. testâ brevi, subpyramidalâ, solidâ, latâ, costis distinctibus, crassiusculis lineatâ, inter costas pruinâ, anfractibus novem, apicalibus parvis, rotundis, fuscis, laevibus, alteris ad suturam subscalis, aperturâ subaurantiâ, plicâ parietali parvâ, plicâ columellari nullâ.*

THE DISTANT-RIDGED CLAUSILIA. Shell short, pyramidal, solid, broad, ridged with distant, rather thick ribs, plum-coloured between the ribs; whorls nine, apical small, round, brown, smooth, others with slight steps at the suture; aperture slightly orange, parietal plait small, columellar plait none.

SOWERBY.

Hab. — ?

Species 161. (Mus. Sowerby.)

CLAUSILIA KÜSTERI. *Cla. testâ tenui, cornâ, subfusiformi, laevi, anfractibus duodecim, apicali turbato, ultimo infra subattenuato; aperturâ oblongâ, ad suturam elevatâ, plicâ columellari magnâ.*

KÜSTER'S CLAUSILIA. Shell thin, horny, subfusiform, smooth, whorls twelve, apical turbinated, last attenuated below; aperture oblong, raised at the suture; columellar plait large.

ROSSMÄSLER. Pfeiffer. Mon. Hel. II. 399.

Clausilia substriata. Küster?

Hab. Sardinia, Corsica.

Species 162. (Mus. Brit.)

CLAUSILIA SEPTEPLICATA. *Cla. testâ fuscâ, levi, fusiformi, medio ventricosi; anfractibus novenis, ad suturam minutè albo tuberculatis, ultimo prolongato, ad dorsum stigmatè albo elongato flexuoso notato; aperturâ magnâ, margine albo, plicâ parietali minutâ, plicâ columellari elongatâ, plicis internis et subinternis quinis.*

THE SEVEN-PLAITED CLAUSILIA. Shell brown, smooth, fusiform, middle ventricose; whorls nine, with minute white tubercles at the suture, last prolonged, marked at the back with a white, long, flexuous stigma; aperture large, margin white, parietal plait minute, columellar plait elongated, interior and subinterior plaits five.

PHILIPPI. Pfeiffer. Mon. Hel. II. p. 452.

Clausilia prasina. Benson.

Clausilia sublaris. Zeigler.

Clausilia sericina. Rossmäslér.

Hab. Sicily.

Species 163. (Mus. Sowerby.)

CLAUSILIA MONTANA. *Cla. testâ parvâ, pruinosâ, tenuissimè striatâ, fusiformi; anfractu ultimo ad dorsum infusè subcarinato, ante aperturam tumido, tum convexato, aperturâ fuscâ, oblongâ, plicâ internâ perpendiculari, columellâ buplicatâ.*

THE MOUNTAIN CLAUSILIA. Shell small, plum-

coloured, very finely striated, fusiform; last whorl with a keel at the back below, tumid before the aperture, then drawn in; aperture fulvous, oblong, with a perpendicular internal plait; columella two-plaited.

MOUSSON. —?

Hab. Mountains in Europe.

Species 164. (Mus. Sowerby.)

CLAUSILIA LOWEL. *Cla. testâ parvâ, pruinosâ, subdistanter liratâ, liris filiformibus; anfractibus decenis, medianis inferioribus convexis; aperturâ subovata, multiplicatâ.*

LOWE'S CLAUSILIA. Shell small, plum-coloured, rather distantly ridged, ridges filiform; whorls ten, middle and lower convex; aperture pale orange, many-plaited.

ALBERS. Küster, p. 177.

Clausilia deltostrata. De Paiva.

Hab. Madeira.

Species 165. (Mus. Sowerby.)

CLAUSILIA VIREX. *Cla. testâ brevi, ventricosâ, pullidè pruinosâ; anfractibus novenis, ad suturam minutissimè plicatis, ultimo profundè rimato, infra subcarinato; aperturâ magnâ, margine tenui, expanso, plicis parietali et columellari crassis; labio externo superne incrassato.*

THE BRUISE-MARK CLAUSILIA. Shell short, ventricose, pale plum-colour; whorls nine, very finely plaited at the suture, last deeply notched, with a slight keel below; aperture large, margin thin, expanded, parietal and columella thick, outer lip thickened above.

ROSSMÄSLER. Pfeiffer. Mon. Hel. II. p. 455.

Clausilia diplana. Heutz.

Hab. Central Croatia.

CLAUSILIA.

	Plate.	Species.		Plate.	Species.
<i>abietana</i> , Dupuy	IX.	77	<i>Chersonensis</i> , Ferrussac	V.	41
<i>aculus</i> , Adum	X.	94	<i>cinebra</i> , Scholtz	XVI.	146
<i>albocincta</i> , Pfr. <i>brevisima</i>			<i>clathrata</i> , Rossmäslcr	III.	23
<i>albuguttulata</i> , Meyner	XI.	56	<i>claviformis</i> , Pfeiffer	XII.	108
<i>anatolica</i> , Rothman	II.	11	<i>Cochin-chinensis</i> , Pfeiffer	XVI.	147
<i>anceps</i> , Zeigler	IV.	30	<i>colbeaniana-plumbea</i>		
<i>angustata</i> , Bielz	VI.	50	<i>commutata</i> , Rossmäslcr	IX.	85
<i>aquila</i> , L.	XV.	137	<i>compressa</i> , Pfeiffer	XII.	113
<i>Arakana</i> , Theobald	IX.	78	<i>concilians-pagana</i>		
<i>assata</i> , Zeigler	XIV.	134	<i>concentanea</i> , Zeigler	VI.	55
<i>bacillum</i> , Benson	VI.	48	<i>conspersa</i> , Parreys	IV.	29
<i>Badia</i> , Zeigler	XII.	117	<i>consimilis</i> , Zeigler	IV.	30
<i>Bartletti</i> , A. Adams	I.	2	<i>contaminata</i> , Zeigler	XIV.	126
<i>Belcheri</i> , Pfeiffer	XII.	107	<i>costica-bimolabra</i>		
<i>Bergeri</i> , Mayer	XI.	103	<i>corpulenta</i> , Kutschitz	XIII.	124
<i>Bengalensis</i> , Busch	VII.	61	<i>corrugata</i> , Menke	XV.	112
<i>bidens</i> , Linnæus	IX.	75	<i>costicaria</i> , Von Busch	XIII.	123
<i>bidentula</i> , Mörch	IV.	31	<i>costulata</i> , Parreys	XIII.	124
<i>Bielzi</i> , P.	III.	23	<i>costulata</i> , Wood	I.	1
<i>binotata</i> , Rossmäslcr	VI.	55	<i>crassicostata</i> , Benoit	VIII.	71
<i>bilabiata</i> , Wagner	VII.	57	<i>crassiuscula</i> , Menke	VI.	56
<i>bilabrata</i> , Smith	XIV.	135	<i>crenulata</i> , Ferrussac	V.	45
<i>biplicata</i> , Montagne	I.	3	<i>crispata</i> , Lowe	III.	26
<i>bipustulata</i> , Küster	VI.	55	<i>critica</i> , Bielz	XVII.	158
<i>Blanca</i> , Zeigler	VIII.	68	<i>cruda</i> , Schmidt	XIII.	117
<i>Blandiana</i> , Pfeiffer	XVI.	155	<i>cyclostoma</i> , Pfeiffer	VII.	63
<i>Boissieri</i> , Charpentier	XVI.	154	<i>cylindrelleformis</i> , Bourguignat	III.	22
<i>Borneensis</i> , Pfeiffer	XV.	141	<i>cylindrica</i> , Hanley	VII.	65
<i>bulbus</i> , Benson	VI.	51	<i>cylindrica</i> , Gray	II.	18
<i>Buschii</i> , Küster	XV.	140	<i>camingiana</i> , Pfeiffer	X.	88
<i>caerulea</i> , Ferrussac	XVII.	156	<i>dacia</i> , Fricvaldsky's	XI.	96
<i>cinebra</i> , Pfeiffer	XIV.	134	<i>Dalmatina</i> , Partsch	XVII.	157
<i>callosa</i> , Muhlfeidt	XV.	145	<i>decipiens</i> , Zeigler	III.	19
<i>canaliculata</i>			<i>decurata</i> , Zeigler	II.	15
<i>Cana</i> , Heldenma	XV.	138	<i>Delessertii</i> , Bourguignat	XV.	143
<i>canaliculata</i> , Pfeiffer	XIV.	128	<i>deltostoma</i> , Lowe	III.	28
<i>candidilabris</i> , Porro	II.	17	<i>Democletiana</i> , Menke	VI.	54
<i>cattaroensis</i> , Zeigler	VII.	64	<i>deagabalis</i> , Zeigler	II.	14
<i>castanea</i> , Küster	VIII.	68	<i>dentiducta</i>		
<i>castana</i> , R. B.	XIII.	125	<i>deplana</i> , Stentz	XVII.	165
<i>cecidia</i> , Pfeiffer	IX.	80	<i>depressa</i> , Joffeys	II.	13
<i>cerea</i> , Menke	VI.	49	<i>dilemma</i> , Parreys	IV.	31
<i>Charpentieri-cattaroensis</i>			<i>discolor</i> , Pfeiffer	III.	20

CLAUSILIA.

	Plate.	Species.		Plate.	Species.
distantiibrata, Sowerby	XVII.	160	interrupta	XV.	136
distans, Pfeiffer	XII.	112	irregularis, Zeigler	XI.	97
Dohrnii, Pfeiffer	IX.	81	Itala, Martens	VI.	56
Duboisii, Charpentier	XVII.	159	Javana, Pfeiffer	IV.	33
dubia, Draparnaud	IX.	77	Jos. Benson	VIII.	75
elata-somethica			Kobensis, Smith	X.	92
elegantula, Parreys	IV.	31	Küsteri, Rossmüller	XVII.	161
elegans, Bielz	II.	12	Kutschii, Küster	XIII.	124
elongata, Cantraine	III.	27	labiata, Sowerby	I.	1
epibaurica, Kutsch	XVII.	157	labiocrassa, Muhlfieldt	VII.	57
Euboa, Parreys	XIV.	128	laevigata, Muhlfieldt	VII.	64
exarata, Zeigler	II.	14	laevigata, Muhlfieldt	II.	15
exilis (succineata var.), Lowe	XII.	106	laevissima, Zeigler	II.	15
excavata			lanceolata, Leach	II.	13
excellens, Pfeiffer	X.	89	laminata, Montagu	II.	13
exigua			latilabris, Muhlfieldt	II.	17
exilis, Adams	I.	8	latistriata, Parreys	IV.	34
fasciolaris, Parreys	V.	41	lerosicensis, Ferrassac	XI.	105
fallax, Rossmüller	III.	19	lesinacensis, Parreys	VII.	64
filiformis, Parreys	V.	39	lincolata, Pfeiffer	IV.	36
filiformis, Zeigler	XV.	136	Lischenna, Bielz	XIII.	116
flumbrata, Muhlfieldt	VIII.	67	litigiosa, Zeigler	IV.	30
fluvialis, Benson	X.	91	livens, Bielz	XIII.	116
fontana, Schmidt	XIII.	117	Lowe, Küster	XVII.	164
formosa			loxostoma, Benson	VII.	61
Formosenses, H. Adams	I.	4	lucida, Menke	II.	13
Fortunei, Pfeiffer	XI.	102	lucostigma, Zeigler	II.	17
Frauenfeldi, Zeebor	XI.	99	lunellaris, Pfeiffer	XVI.	154
Fregerii, Küster	III.	27	Macaratu	I.	7
fulcata			Macascarensis, Sowerby	I., XV.	7, 142
fulginea, Parreys	II.	15	Macrostoma, Cantraine	XIV.	130
funiculum, Crosse	VIII.	71	Marcelia, Risso	IV.	31
fusiformis, Blanford	VII.	62	madensis, Fassevadorf	XIV.	127
gastrolepa, Zeigler	III.	27	magnifica, Parreys	VII.	58
glabrata, Muhlfieldt	II.	15	marginata, Zeigler	VI.	54
Gouldiana, Pfeiffer	XVI.	148	Maranihiensis, Allers	XIII.	122
gracile, Pfeiffer	IX.	77	marmorata, Parreys	VI.	49
gracilicosta, Kutsch	VIII.	73	Masoni, Thorball	VIII.	69
granulata, Zeigler	II.	13	Meisneriana, Shuttleworth	X.	87
grassa, Parreys	IV.	30	mesoma, Parreys	IV.	30
Hanevi, Bielz	XII.	115	mediterranea, Gray	IX.	76
Hindobonensis, Pfeiffer	IX.	77	minima, Parreys	III.	21
honorifica, Parreys	VII.	58	Molluccensis-commutata		
Idea, Pfeiffer	XII.	111	Montagu, Gray	I.	3
imbicilis, Parreys	III.	27	Montana, Monson	XVI.	163
index, Monson	IX.	79	Mortilleti, Darnont	III.	24
inflata, Delle	XIV.	130	Mouhoti, Pfeiffer	II.	16
insignis, Gould	VI.	53	neuridis, Studer	IV.	30
intercedens, Schmidt	II.	12	nigricans, Pulleney	IV.	31

CLAUSILIA.

	Plate.	Species.		Plate.	Species.
<i>atrida</i> , Muhlfeldt ...	V.	41	<i>rugilabris</i> , Monsson ...	XIV.	132
<i>ayngula</i> , Parreys ...	VIII.	66	<i>rossi</i> , <i>Boissac</i> ...	V.	44
<i>obscura</i> , Parreys ...	III.	19	<i>zeigleri</i> , <i>Zeigler</i> ...	IV.	30
<i>obscura</i> , Pfeiffer ...	IV.	31	<i>Sandbergeri</i> , <i>Monsson</i> ...	VIII.	70
<i>odontosa</i> , anceps ...	IV.	39	<i>Sandbergeri</i> , <i>Kuster</i> ...	VII.	58
<i>Olivieri</i> , <i>Roth</i> ...	IV.	37	<i>satelles</i> , Schundt ...	III.	24
<i>Olympiae</i> , <i>Friedrich</i> ...	X.	95	<i>saturata</i> , <i>Zeigler</i> ...	VIII.	67
<i>omnino</i> , <i>Zeigler</i> ...	XV.	146	<i>scabris</i> , <i>Boissac</i> ...	XII.	114
<i>opulenta</i> , <i>Zeigler</i> ...	II.	17	<i>Scheibleri</i> , <i>Zeigler</i> ...	IX.	77
<i>orthostoma</i> , <i>Meake</i> ...	V.	43	<i>Schmidtii</i> , <i>Boissac</i> ...	XIII.	111
<i>ovata</i> , <i>Boissac</i> ...	VII.	69	<i>Seiversi</i> , <i>Pfeiffer</i> ...	IX.	84
<i>paedagastri</i> ...	X.	100	<i>semidenticulata</i> , <i>Pfeiffer</i> ...	XI.	101
<i>pagana</i> , <i>Zeigler</i> ...	X.	100	<i>semilamellata</i> , <i>Monsson</i> ...	IX.	83
<i>papillaris</i> , <i>Brugniere</i> ...	IX.	75	<i>semitrigata</i> , <i>Zeigler</i> ...	V.	41
<i>paradoxa</i> , <i>Zeigler</i> ...	IV.	34	<i>sericata</i> , <i>Pfeiffer</i> ...	XI.	104
<i>Parreysii</i> , <i>Zeigler</i> ...	VI.	49	<i>sericata</i> , <i>Rossmäslar</i> ...	XVII.	162
<i>parvula</i> , <i>Studer</i> ...	III.	21	<i>septemphialata</i> , <i>Philippi</i> ...	XVII.	162
<i>permaria</i> , <i>Martini</i> ...	XIII.	119	<i>Shanghaiensis</i> , <i>Pfeiffer</i> ...	V.	46
<i>Phalerata</i> , <i>Zeigler</i> ...	XIII.	67	<i>siacula</i> , <i>Boissac</i> ...	XIV.	131
<i>Phedusa</i> , <i>A. Adams</i> ...	I.	5	<i>Sieboldii</i> , <i>Pfeiffer</i> ...	XIII.	121
<i>Philippiana</i> , <i>Pfeiffer</i> ...	IV.	35	<i>Somehetica</i> , <i>Pfeiffer</i> ...	XI.	98
<i>pikermaniana</i> ...			<i>sp. n.</i> , <i>Pfeiffer</i> ...	IX.	77
<i>petrosa</i> , <i>Parreys</i> ...	XII.	110	<i>stigmatica</i> , <i>Zeigler</i> ...	XV.	139
<i>phalabris</i> , <i>Rossmäslar</i> ...	XII.	57	<i>Stimpsoni</i> , <i>Adams</i> ...	V.	47
<i>Phatydina</i> , <i>Martens</i> ...	X.	99	<i>stragulata</i> , <i>Ferrussac</i> ...	V.	42
<i>phiala</i> , <i>Draparnaud</i> ...	IX.	50	<i>striatocollis</i> , <i>Parreys</i> ...	VIII.	66
<i>plicatula</i> , <i>Montagne</i> ...	X.	85	<i>stramineicollis</i> , <i>Parreys</i> ...	XIV.	133
<i>placosa</i> , <i>Ferrussac</i> ...	IV.	33	<i>striata</i> , <i>Muhlfeldt</i> ...	VII.	68
<i>placota</i> , <i>Zeigler</i> ...	IV.	30	<i>striata</i> , <i>Parreys</i> ...	VII.	67
<i>plumbea</i> , <i>Rossmäslar</i> ...	V.	49	<i>substriata</i> , <i>Kuster</i> ...	XVII.	161
<i>plumbea</i> , <i>Zeigler</i> ...	XV.	73	<i>subultrix</i> , <i>Zeigler</i> ...	XVII.	162
<i>proxima</i> , <i>Benson</i> ...	XVII.	162	<i>succinata</i> , <i>Zeigler</i> ...	VIII.	66
<i>proxima</i> , <i>Walden</i> ...	XVI.	153	<i>succinata</i> , <i>Boissac</i> ...	IX.	76
<i>puella</i> , <i>Parreys</i> ...	V.	41	<i>sulcata</i> , <i>Walden</i> ...	XI.	97
<i>pulchra</i> , <i>Parreys</i> ...	IV.	30	<i>sumatrana</i> , <i>Martens</i> ...	VII.	59
<i>punctata</i> , <i>Michaud</i> ...	VI.	53	<i>superstructa</i> , <i>Parreys</i> ...	II.	15
<i>pygmaea</i> ...	V.	41	<i>Swinhoei</i> , <i>Boissac</i> ...	III.	25
<i>pyramidea</i> , <i>Charpentier</i> ...	V.	45	<i>syracusana</i> , <i>Philippi</i> ...	XIV.	139
<i>reclata</i> , <i>Zeigler</i> ...	VIII.	73	<i>tabula</i> , <i>Kuster</i> ...	III.	27
<i>Raymondi</i> , <i>Bourguignat</i> ...	XVI.	156	<i>tenata</i> , <i>Zeigler</i> ...	V.	39
<i>Reboulia</i> , <i>Charpentier</i> ...	V.	45	<i>taurica</i> ...		
<i>reflexa</i> , <i>Zeigler</i> ...	VII.	57	<i>Taylori</i> , <i>Pfeiffer</i> ...	I.	6
<i>reflexilabris</i> , <i>Cantraine</i> ...	VII.	57	<i>tenuis</i> , <i>Parreys</i> ...	III.	23
<i>regalis</i> = <i>plumbea</i> .			<i>tenos</i> , <i>Boissac</i> ...	XIII.	120
<i>Rowiana</i> , <i>Kobelt</i> ...	XIV.	129	<i>Tetzelackiana</i> , <i>Pfeiffer</i> ...	IX.	77
<i>reliosa</i> , <i>Parreys</i> ...	V.	42	<i>torticollis</i> , <i>Olivieri</i> ...	II.	19
<i>Rolphii</i> , <i>Leach</i> ...	III.	21	<i>Transylvanica</i> , <i>Stentz</i> ...	II.	13
<i>radis</i> , <i>Pfeiffer</i> ...	XII.	189	<i>tridens</i> , <i>Chemnitz</i> ...	I.	4
<i>rugata</i> , <i>Parreys</i> ...	V.	41	<i>Tristani</i> , <i>Pfeiffer</i> ...	V., XVI.	45

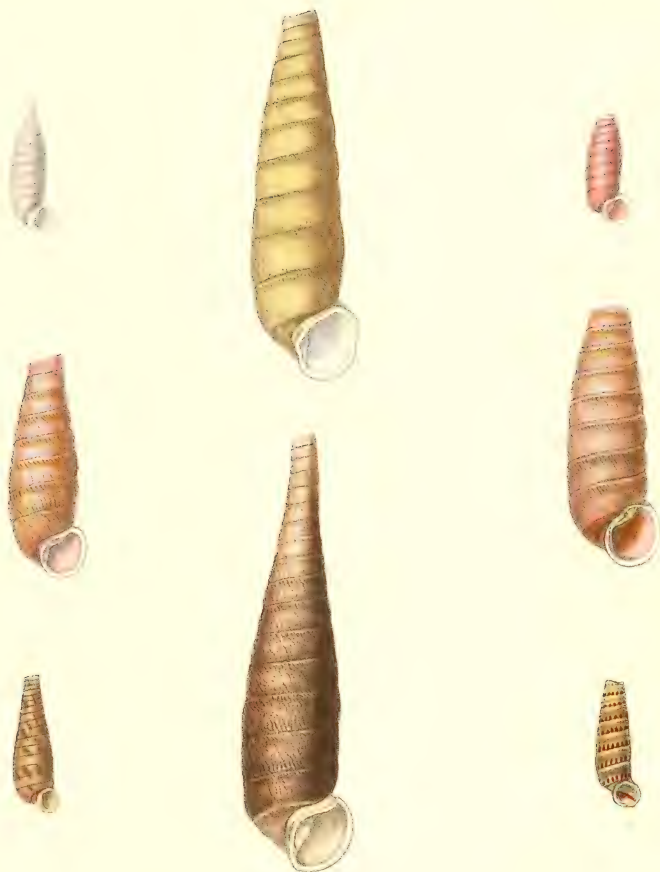
CLAUSILIA.

	Plate.	Species.		Plate.	Species.
tuba, <i>Honley</i>	XIII.	72	vetusta, <i>Zeigler</i>	X.	93
tarritella, <i>Sowerby</i>	VII.	65	virens, <i>Muhlfeldt</i>	VIII.	67
vallata, <i>Mousson</i>	V.	43	viregata, <i>Jan.</i>	IX.	76
valida, <i>Pfiffer</i>	VI.	52	vitrea, <i>Biele</i>	VI.	54
varians, <i>Zeigler</i>	XVI.	152	vitrea, <i>Stentz</i>	IX.	76
vellata, <i>Adams</i>	V.	43	Waldendorffii=Gouldiana.		
ventricosa, <i>Draperinaud</i>	IV.	34	Yokohamensis, <i>Crosse</i>	IX.	82
ventricosa=Montana.					

MONOGRAPH
OF THE GENUS
CYLINDRELLA.

O LORD of heaven, and earth, and sea,
To Thee all praise and glory be ;
How shall we show our love to Thee,
Who givest all ?

Bishop Christopher Wordsworth.



CYLINDRELLA.

PLATE I.

Genus CYLINDRELLA, Pfeiffer.

Testa terrestris, elongato-turrita, plerumque dextralis; anfractibus numerosis, apicalibus, deciduis; apertura plerumque orata, margine continuo.

Shell terrestrial, elongate-turreted, generally dextral; whorls numerous, apical, deciduous; aperture usually ovate, with continuous margin.

The *Cylindrella* are much more variable in form than the *Chausilie*, and are without the internal plate or *chasmus* which distinguish that genus. The first-formed whorls generally fall off when the shell is advanced in growth. In many species the aperture is brought round suddenly, so as to form a sort of crease (*rima*) with the coiled part of the body-whorl. In others the last whorl is distorted or uncoiled (*solutus*), so as to place the aperture at a distance from the body of the shell. In a very few, the margin of the aperture is interrupted by the ventral bulge of the whorl. Considerably more than one-third of the reported species are from the island of Cuba, one-fifth from Jamaica; another fifth would be made up between Haiti and Mexico; leaving very few for a dozen other isolated localities, including Great Britain, which produces four or five.

Species 1. (Mus. Brit.)

CYLINDRELLA ASPERA. *Cyl. testâ solidâ, pupiformi, albâ vel rosâ, striatâ, versus apicem pyramidalitâ; medio et infra cylindricâ; anfractibus sexdecimis, apicalibus inclusis, ultimo rimato; apertura subrotundâ, margine crasso, columellâ intus plicatâ.*

THE ROUGH CYLINDRELLA. Shell solid, pupiform, whitish or rose, striated, pyramidal towards the apex, cylindrical in the middle and below; whorls sixteen (including apical), last notched; aperture rather round, margin thick, columella plaited within.

ADAMS. Pfeiffer, Mon. III. p. 564.
Hab. Jamaica.

Species 2. (Mus. Brit.)

CYLINDRELLA SPECIOSA. *Cyl. testâ magnâ, solidiusculâ, cylindrico-subpyramidalitâ, oblique striatâ, olivaceâ,*

ventricosâ; anfractibus permanentibus undecenis, paulo convexis, ad suturam crenatis, quinque inferioribus subaequalibus, ultimo angulato, contracto, longè rimato, supra aperturam arcuato; apertura auriformi, margine superiori subflexuoso, columellâ rix plicatâ.

THE SPECIOUS CYLINDRELLA. Shell large, rather solid, cylindrico-subpyramidal, obliquely striated, olive, ventricose; permanent whorls eleven, a little convex, crenated at the suture, five lower nearly equal, last angular, contracted, with a long crease, arched above the aperture; aperture auriform, upper margin rather flexuous, columella hardly plaited.

DUNKER. Pfeiffer, Mon. IV. p. 695.

Hab. Columbia.

This handsome species loses its primary whorls far down from the apex, so as to make a broadly-truncated break.

Species 3. (Mus. Brit.)

CYLINDRELLA SPLENDIDA. *Cyl. testâ ventricosâ, solidiusculâ, oblique costatâ, convexo-rotundâ; anfractibus permanentibus octonis, medianis inflatis, ultimo contracto, longè rimato, supra marginem aperture arcuato; apertura auriformi, columellâ leviter bicipitatâ.*

THE SPLENDID CYLINDRELLA. Shell ventricose, rather solid, obliquely ribbed, fleshy violet; permanent whorls eight, middle inflated, last contracted, with a long notch, arched above the margin of the aperture; aperture auriform, columella slightly bicipitated.

PFEIFFER. Proc. Zool. Soc. 1860, p. 139.

Hab. Mexico.

Species 4. (Mus. Brit.)

CYLINDRELLA GRANDIS. *Cyl. testâ magnâ, cylindricâ, latâ, tenuiusculâ, tenuiter striatâ, fusco-rubescens, suturâ albido-marginatâ; anfractibus permanentibus octonis, altis, quaternis inferioribus subaequalibus, ultimo contracto, angulato, profundè rimato; apertura magnâ, latè suboccatâ; columellâ rectiusculâ.*

CYLINDRELLA.—PLATE I.

THE LARGE CYLINDRELLA. Shell large, cylindrical, broad, finely striated, reddish-brown, suture bordered with whitish; permanent whorls eight, high, the four lower nearly equal, last contracted, angular, deeply notched; aperture large, broadly subovate; columella rather straight.

PFEIFFER. Proc. Zool. Soc. 1860, p. 139.

Hab. Mexico.

Much more cylindrical than the preceding, and more finely sculptured.

Species 5. (Mus. Brit.)

CYLINDRELLA ARISTISPICA. *Cyl. testā solidā, subpyramidatā, infra medium tumidā, fusco-olivaceā, fusco-rubescētī strigatā, regulariter striatā, superne contractā, medio et infra subventricosā; anfractibus permanentibus sexdecenis, depressis, ultimo contracto, rimato; aperturā subrotundā, margine crasso, rotundo, columellā subplicatā.*

THE CORN-SPIKE CYLINDRELLA. Shell solid, rather pyramidal, tumid below the middle, olive-brown, striped with reddish-brown, regularly striated, contracted above, rather ventricose in the middle and below; permanent whorls sixteen, depressed, last contracted, notched; aperture roundish, margin thick, round, columella slightly plaited.

PFEIFFER. ? MS. Mus. Brit.

Hab. — ?

Species 6. (Mus. Brit.)

CYLINDRELLA EXIMIA. *Cyl. testā solidā, cylindricā, reticulatā, laxigatā, griseā, supra suturam fasci-*

fulvā, maculis rubris articulatā, infra suturam fasciā-fulvā, immaculatā, ornatā; anfractibus permanentibus octonis, ultimo angulato, subcontracto; aperturā subtrapezoidā.

THE EXQUISITE CYLINDRELLA. Shell solid, cylindrical, straight-sided, smooth, grey, ornamented above the suture with a fulvous band articulated with red spots, and under the suture with a spotless fulvous band; permanent whorls eight, last angular, rather contracted; aperture subtrapezoidal.

PFEIFFER. Proc. Zool. Soc. 1858, p. 23.

Hab. Haiti.

Species 7. (Mus. Brit.)

CYLINDRELLA GHEISBREGHTI. *Cyl. testā magnā, solidā, fumoso-fuscā, medio et infra latā, bulbosā, superne contractā; sulcis irregulariter undatis rugatā; anfractibus permanentibus sexdecenis, superioribus sensu angustis, alteris gradatim crescentibus, ultimo infra contracto, angulato, rimato, supra marginem superiorem aperturæ fornicato; columellā uniplicatā.*

GHEISBREGHT'S CYLINDRELLA. Shell large, solid, smoky-brown, broad and bulbous in the middle and below, contracted above, wrinkled with irregular, wavy grooves; permanent whorls sixteen, upper six narrow, others gradually increased, last contracted below, angular, notched, vaulted above the upper margin of the aperture; columella single-plaited.

PFEIFFER. Mon. IV. p. 694.

Hab. Chiapa, Mexico.

A large shell of remarkably bulbous form and wrinkled texture.



CYLINDRELLA.

PLATE II.

Species 8. (Mus. Brit.)

CYLINDRELLA FLAMMULATA. *Cyl. testâ pupæformi, solidâ, griseâ, fusco-corneo-flammulatâ, lævigatâ; anfractibus rectiusculis, ultimo contracto, angustâ, 5 medianis subæqualibus, deinde versûs apicem contractis; labio integro subrotundo, simplici.*

THE FLAMED CYLINDRELLA. Shell pupa-shaped, solid, grey with horn-brown flames, smooth; whorls rather straight, the last contracted, narrow, five middle nearly equal, thence towards the apex contracted; lip entire, rather round, simple.

PREIFFER. Monograph ii.

Cylindrella planulata, Pfeiffer.

Hab. Hayti—St. Domingo.

Species 9. (Fig. a, b, Mus. Brit.)

CYLINDRELLA CYLINDREUS. *Cyl. testâ pupæformi, tenuiter striatâ, roseâ, purpureâ vel albidâ, anfractibus rectiusculis, ultimis 5 subæqualibus, deinde versûs apicem contractis; aperturâ productâ, labio simplici, columellâ intus planatâ.*

THE CYLINDER CYLINDRELLA. Shell pupa-shaped, finely striated; pink, purple, or white whorls rather straight, five last nearly equal, thence towards the apex contracted; aperture produced; lip simple; columella flattened within.

CHEMNITZ. Conchological Cabinet.

Cylindrella purpurea, Gray.

Pupa rosea, Adams.

Cylindrella rubella, Adams.

Cylindrella procerâ, Adams.

Hab. Jamaica.

Species 10. (Mus. Brit.)

CYLINDRELLA ZONATA. *Cyl. testâ pupæformi, tenuiter striatâ, purpurâ, purpureo-nigrescenti latè zonatâ; anfractibus latis, altis, 5 ultimis subæqualibus,*

deinde gradatim contractis; aperturâ subproductâ, subauriformi, intus flexuâ, labio rotundo.

THE BANNED CYLINDRELLA. Shell pupa-shaped, finely striated, purple, broadly banded with blackish-purple; whorls broad, elevated, five last nearly equal, then gradually contracted; aperture rather produced, rather auriform, flexuous within, lip rounded at the margin.

C. B. ADAMS. Pfeiffer's Monograph.

Hab. Jamaica.

Species 11. (Mus. Brit.)

CYLINDRELLA ROSEA. *Cyl. testâ angustâ, cylindricâ, acutè tenuiter striatâ, roseâ, anfractibus rectiusculis; 5 ultimis subæqualibus, ultimo infirâ contracto; aperturâ rîe solutâ, aperturâ subquadratâ; columellâ intus latâ.*

THE PINK CYLINDRELLA. Shell narrow, cylindrical, sharply and finely striated, pink, whorls rather straight; five last whorls rather equal, last contracted below; aperture scarcely uncoiled, aperture rather square; columella broad within.

CHEMNITZ. Conch. tab. 2, f. 31, 32.

Hab. Jamaica.

In this species, as in *C. aspera*, the striae are sharp and fine.

Species 12. (Mus. Brit.)

CYLINDRELLA SANGUINEA. *Cyl. testâ subpupæformi, sanguineâ, tenuiter striatâ, medio subinflatâ, versûs apicem contractâ; anfractibus depressis, numerosis; aperturâ subquadratâ, labio incusato.*

THE SANGUINEOUS CYLINDRELLA. Shell rather pupa-shaped, blood-coloured, finely striated, a little inflated in the middle, contracted towards the apex; whorls depressed, numerous; aperture rather square, lip thickened.

CHEMNITZ. Conch. 7, t. 1, figs. 18–20.

Cylindrella cornea, Adams.

Hab. Jamaica.

CYLINDRELLA.—PLATE II.

Species 13. (Mus. Brit.)

CYLINDRELLA OVIEDOIANA. *Cyl. testā elongato-cylindrica, versus apicem gradatim attenuatā, cornu, medio rubrā, striis rectiusculis tenuiter liratā; ultimo anfractu alto; aperturā lateraliter productā, rotundā, margine integro, rotundo.*

THE OVIEDO CYLINDRELLA. Shell elongated-cylindrical, gradually attenuated towards the apex, horny, red in the middle, finely ridged with rather straight striae; last whorl elevated; aperture laterally produced, rounded, margin entire, rounded.

D'ORBIGNY. Mollusca of the Isl. of Cuba, tab. 12, f. 15-17.

Hab. Cuba.

Species 14. (Mus. Brit.)

CYLINDRELLA PROCERA. *Cyl. testā ventricosa, pupæformi, tenuissimè striatā; anfractibus 4 ultimis subæqualibus, altis, latis, deinde alteris gradatim angustioribus; aperturā rotundo-subquadratā; columellā leviter plicatā, labio crasso, rotundo.*

THE ELEVATED CYLINDRELLA. Shell ventricose, pupa-shaped, very finely striated; four last whorls nearly equal, elevated, broad, thence others gradually narrowing; aperture roundly-subquadrate; columella lightly plaited, lip thick, round.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica.

Species 15. (Mus. Brit.)

CYLINDRELLA AMETHYSTINA. *Cyl. testā cylindricā, rectiusculā levigatā, rubro-purpureā; anfractibus superne fusco fuscatis; aperturā magnā, subrotundā, labio subapertā, profundè incrassatā.*

THE AMETHYSTINE CYLINDRELLA. Shell cylindrical, rather straight, smooth, purplish-red; whorls banded above with brown; aperture large, rather rounded, lip somewhat expanded, deeply thickened.

CHITTY. Pfeiffer's Monograph I.

Hab. Jamaica.

A more straight-sided shell than others of the same group.

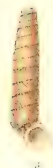
Species 16. (Mus. Brit.)

CYLINDRELLA ADAMSIANA. *Cyl. testā breviter cylindricā, tenui, lavi, cornu variegatā, ad suturam fusco alboque articulatā; aperturā obliquā, lateraliter subproductā, labio rotundo.*

THE ADAMSIAN CYLINDRELLA. Shell shortly cylindrical, thin, smooth, variegated with horn-colour, articulated with brown and white at the suture; aperture oblique, a little produced laterally; lip rounded.

PFEIFFER. Monographia Heliceorum, I.

Hab. Hayti.



CYLINDRELLA.

PLATE III.

Species 17. (Mus. Brit.)

CYLINDRELLA VENTRICOSA. *Cyl. testâ brevi, ventricosâ, medio inflatâ, suprà infraque angustatâ, anfractibus purpureo alboque strigatâ, ultimo brevi, angustâ, post columellam excavatâ; aperturâ parvâ, rotundâ.*

THE VENTRILOSE CYLINDRELLA. Shell short, ventricose, inflated in the middle, narrowed above and below, whorls striped with purple and white, last short, narrow, hollowed behind the columella; aperture small, round.

GENSLACH. Pflr. Novit. Conch. p. 250.

Hab. Cuba.

Species 18. (Mus. Brit.)

CYLINDRELLA GRAVESII. *Cyl. testâ brevi, subcylindricâ, infriâ fuscâ, suprà albâ, anfractibus rectiusculis, ultimis subæqualibus, deinde versûs apicem subito contractis; ultimo rinatâ, breviter solutâ; aperturâ lateraliter subproductâ, rotundâ, margine rotundâ.*

GRAVES'S CYLINDRELLA. Shell short, subcylindrical, brown below, whitish above, whorls rather straight, the last nearly equal, thence towards the apex suddenly contracted; last notched, shortly loosened; aperture rather produced laterally, rounded, with rounded edge.

ADAMS. Pfeiffer, Monographia Helicorum, iii. 570.

Hab. Jamaica.

Species 19. (Mus. Brit.)

CYLINDRELLA SUTURALIS. *Cyl. testâ brevi, pupâformi, rirâ rinatâ, tenuisculâ, obliquè minutissimè striatâ, nitens, cornâ, medio ventricosâ, apice attenuatâ, acutâ, suturâ castaneo marginatâ; anfractibus 12, convexiusculis, ultimo rirâ solutâ, aperturâ obliquâ, subcirculari, margine tenui, breviter expansâ.*

THE SUTURED CYLINDRELLA. Shell short, pupa-shaped, scarcely notched, rather thin, obliquely very minutely striated, shining, horn-coloured, ventri-

cose in the middle, apex attenuated, sharp, suture bordered with chestnut; whorls twelve, rather convex, last very slightly loosened; aperture oblique, rather circular, with thin edge, slightly expanded.

WEINLAND. Mal. Bl. ix. 1862, p. 194.

Hab. Haiti.

Species 20. (Mus. Brit.)

CYLINDRELLA SOWERBYANA. *Cyl. testâ subpyramidatâ, griseo-fusâ, subrinatâ, anfractibus rirâ convexis, elegantè obliquè latis, versûs apicem gradatim attenuatis, ultimo infri subcarinatâ; aperturâ subrotundâ; columellâ intus laminatim plicatâ.*

SOWERBY'S CYLINDRELLA. Shell subpyramidal, brown-grey, slightly notched; whorls scarcely convex, elegantly obliquely ridged, gradually attenuated towards the apex, the last slightly keeled below; aperture rather rounded; columella with a laminar plait within.

PEIFFER. Monographia Helicorum, iii. 372.

Hab. Isl. of Cuba.

Species 21. (Mus. Brit.)

CYLINDRELLA CÆRLANS. *Cyl. testâ angustatâ, donatâ, subcorculâ, fusco-griseâ undulatim strigatâ, versûs apicem attenuatâ, medio rirâ inflatâ, anfractibus convexiusculis, numerosis, ultimo contractâ, aperturâ subobliquâ, intus uniplicatâ, margine tenui.*

THE BLuish CYLINDRELLA. Shell narrow, elongated, bluish, with undulating greyish-brown stripes, attenuated towards the apex, slightly inflated in the middle; whorls rather convex, numerous, last contracted; aperture rather oblique, single-plaited within, margin thin.

POEY. Pfeiffer, Mon. Hel. iv. 700.

Hab. Cuba.

April, 1875.

CYLINDRELLA.—PLATE III.

Species 22. (Mus. Brit.)

CYLINDRELLA DENTICULATA. *Cyl. testâ angustâ, attenuatâ, elongatâ, fusco strigatâ, ad suturam denticulatâ, versûs spiram contractâ, suprà medium et infrà rectiâsculo, cylindraceo; aperturâ subobliquè productâ.*

THE DENTICULATED CYLINDRELLA. Shell narrow, attenuated, elongated, striped with brown, denticulated at the suture, contracted towards the spire, rather straight and cylindrical above the middle and below, aperture rather obliquely produced.

PFEIFFER. Chem. p. 65.

Hab. Mexico.

The suture is denticulated with little white points.

Species 23. (Mus. Brit.)

CYLINDRELLA SHUTTLEWORTHIANA. *Cyl. testâ elongatâ, angustatâ, cylindraceâ, subpellucidâ, pallidè fulvâ; anfractibus sublister et obliquè liris, superioribus contractis, medianis et inferioribus subequalibus, rectiâsculis; ultimo elongato, infrà subcarinato, soluto; aperturâ subtriangulâ, obliquè productâ.*

SHUTTLEWORTH'S CYLINDRELLA. Shell elongated, narrow, cylindrical; rather pellucid, pale fulvous, whorls rather distantly obliquely ridged, the upper ones contracted, middle and lower ones rather equal, rather straight, last elongated, slightly keeled below, loosened; aperture subtriangular, obliquely produced.

POEY. Chemnitz, p. 18.

Hab. Cuba.

Species 24. (Mus. Brit.)

CYLINDRELLA PUNCTURATA. *Cyl. testâ pupæformi, brevî, suprà subrosâ, infrà albidâ, medio inflato, versûs apicem gradatim contracto; suturâ articulatim punctatâ; anfractibus rectiâsculis, ultimo subcontracto; aperturâ magnâ, subcontractâ, margine rotundo.*

THE PUNCTURED CYLINDRELLA. Shell pupa-shaped, short, rather pink above, whitish below, inflated in the middle, gradually contracted towards the apex, suture marked with articulated spots; whorls rather straight, the last a little contracted; aperture large, somewhat contracted, margin rounded.

PFEIFFER. Proc. Zool. Soc., 1852.

Hab. St. Domingo.

Species 25. (Mus. Brit.)

CYLINDRELLA HUMBOLDTIANA. *Cyl. testâ sinistrorsâ, subcylindricâ, pallidè fulvâ, tenuissimè striatâ; anfractibus rectiâsculis versûs spiram angustatis; ultimo elongato; aperturâ obliquâ, columellâ uniplicatâ.*

HUMBOLDT'S CYLINDRELLA. Shell sinistral, subcylindrical, pale fulvous, very finely striated; whorls rather straight, narrowed towards the spire, last elongated; aperture oblique, with one plait on the columella.

PFEIFFER. Chem. p. 14, t. 2, f. 20, 24.

Helix columella, Ferr.

Hab. Cuba.

Species 26. (Mus. Brit.)

CYLINDRELLA MACROSTOMA. *Cyl. testâ brevî, profundè rimatâ, solidâ, confertè striatâ, spirâ sursum attenuatâ, medio et infrà subcentricâ; anfractibus vix convexis, ultimo infrà subattenuato, basi corinato; aperturâ ovatâ, labio albo, incrassato, expanso.*

THE LARGE-MOUTHED CYLINDRELLA. Shell short, deeply notched, solid, closely striated, spire attenuated above, rather ventricose above and below; whorls scarcely convex, the last a little lengthened below, keeled at the base, aperture ovate, lip white, thickened, expanded.

PFEIFFER. Chemn. p. 73.

Hab. Jamaica.



CYLINDRELLA.

PLATE IV.

Species 27. (Mus. Brit.)

CYLINDRELLA ALBO-CRENATA. *Cyl. testâ brevi, subventricosâ, solidulâ, obliquè striatâ, corneo et albido variegatâ; spirâ medio subinflatâ, versâ apicem attenuatâ, anfractibus superiè ad suturam nobilibus albis crenatis, ultimo angustato, subulato, infra crenato; aperturâ obliquè subrotundâ, columellâ multiplicatâ.*

THE WHITE-CRENATED CYLINDRELLA. Shell small, rather ventricose, rather solid, obliquely striated, variegated with horn-colour and white; spire a little inflated in the middle, attenuated towards the apex; whorls crenated above at the suture with white nodules, last narrow and somewhat uncoiled, keeled at the bottom; aperture obliquely somewhat rounded; columella single-plaited.

GÜNDLACH. Pfeiffer, Malak. Bl. xi. 1863, p. 7.

Hab. Isl. Cuba.

Species 28. (Mus. Brit.)

CYLINDRELLA OBLIQUA. *Cyl. testâ angustâ, subcylindricâ, fulvâ atque nebulatâ, fusco-griseiscenti hinc-illuc strigatâ, obliquè lividâ, ad suturam crenulatâ, anfractibus rectiusculis angustis, penultimo et suprâ quinquè subaequalibus, spirâ versâ apicem attenuatâ; aperturâ perobliquè ovatâ, labio externo productâ.*

THE OBLIQUE CYLINDRELLA. Shell narrow, subcylindrical, clouded with brown and white, striped here and there with greyish brown, obliquely ridged, crenulated at the suture, whorls rather straight, narrow, the penultimate and five above nearly equal; spire attenuated towards the apex; aperture very obliquely ovate, outer lip produced.

PFEIFFER. Malak. Bl. xi. 1863.

Hab. Isl. of Cuba.

Species 29. (Mus. Brit.)

CYLINDRELLA PERPLICATA. *Cyl. testâ subfusiformi, angustâ, cornâ, anfractibus convexis plicatis apicalibus angustatis, medianis inflatis, ultimo coarctato, longè laxato, plicis anfractuum obliquis, distantibus, prominentibus, medio depressis; aperturâ remotâ, subrotundâ, margine rotundâ, columellâ haud plicatâ.*

THE WELL-PLAITED CYLINDRELLA. Shell rather fusiform, narrow, horny; whorls convex, plaited, the apical ones narrow, middle ones inflated, last contracted, much uncoiled, plaits of the whorls oblique, distant, prominent, depressed in the middle; aperture remote, a little rounded, margin round, columella not plaited.

FERRUSSAC. Pfeiffer, Mon. Helic. ii.

Hab. West Indies.

Species 30. (Mus. Brit.)

CYLINDRELLA PALLIDA. *Cyl. testâ parvâ, pallidâ, fusiformi, versâ apicem attenuatâ, medio inflatâ; anfractibus rix convexis, ultimo infra angustato, longè laxato, plicis anfractuum arcuatis, acutis subdistantibus; aperturâ remotâ, rotundâ; columellâ haud plicatâ.*

THE PALE CYLINDRELLA. Shell small, pale, fusiform, attenuated towards the apex, inflated in the middle; whorls scarcely convex, the last narrow beneath, a long portion unrolled; plaits of the whorls curved, sharp, rather distant; aperture remote, rounded, columella not plaited.

GÜLDING. Bland in Adams's Contributions to Conchology.

Brachypus costatus, Gray.

Cylindrella costulosa, Adams.

Hab. Porto Rico, Isl. St. Thomas.

Species 31. (Mus. Brit.)

CYLINDRELLA PRUINOSA. *Cyl. testâ pallidè purpurâ, elongatâ, angustâ, suprâ medium paulo inflatâ, anfractibus distanter fusco strigatis, plicis elegantè arcuatis, tenuibus numerosis lyratis, ultimo elongato, paulò obliquè soluto; aperturâ obliquè, ovatâ, columellâ multiplicatâ.*

THE PLUM-COLOURED CYLINDRELLA. Shell pale purple, elongated, narrow, a little inflated above the middle, whorls distantly striped with brown, ridged with elegantly curved, thin, numerous plaits; the last elongated, a little obliquely loosened; aperture oblique, oval.

MORELET. In Chemnitz, p. 39.

Hab. Isl. of Pines, near Cuba.

Species 32. (Mus. Brit.)

CYLINDRELLA IRRORATA. *Cyl. testâ cylindricâ, angustâ, rectâ, elongatâ, strigis undulatis parvis, interruptis variegatâ, anfractibus rectis, altis, versus apicem contractis; aperturâ magnâ, auriformi, obliquâ, labio externo anticè producto, supernè depresso; columellâ uniplicatâ.*

THE SPECKLED CYLINDRELLA. Shell cylindrical, narrow, straight, elongated, varied with undulating, small, interrupted stripes; whorls straight, elevated, contracted towards the apex; aperture large, auriform, oblique, outer lip produced anteriorly, depressed above; columella with one plait.

GÜNDLACH. Chem. p. 64.

Hab. Cuba.

Species 33. (Mus. Brit.)

CYLINDRELLA ELONGATA. *Cyl. testâ sinistrâ, albâ, tenuiter striatâ, gracile, fusiformi; anfractibus 14, convexis, altis, versus apicem contractis, infusâ medium inflatis, ultimo brevi, infusâ validè carinato; aperturâ magnâ, ovatâ, infusâ subacuminatâ, labio externo expanso, infusâ vix plicatâ.*

THE ELONGATED CYLINDRELLA. Shell sinistral, white, finely striated, slender, fusiform; whorls fourteen, convex, elevated, contracted towards the apex; inflated towards the middle, the last short, with a strong keel below; aperture large, oval, rather acuminate below, inner lip expanded, with a very slight plait below.

CHEMNITZ. Conch. Cab. p. 58.

Helix Chemnitziana, Férussac.

Pupa gracilis, Sowerby.

Cylindrella Cumingii, Adams.

Hab. Jamaica.

Species 34. (Mus. Brit.)

CYLINDRELLA FASTIGIATA. *Cyl. testâ breviter rimatâ, subulatâ, solidâ, subtiliter validè costatâ, griseo-albidâ; inter costas purpureo; spirâ gracile, longè productâ, anfractibus brevibus, numerosis, rotundis, ultimo infusâ validè compresso, carinato, infusâ carinam striatâ, breviter soluto; aperturâ subtrigonâ, lateraliter breviter productâ, columellâ vix plicatâ.*

THE BOUND CYLINDRELLA. Shell shortly notched, subulate, rather solid, rather distantly strongly ribbed, greyish white, purple between the ribs; spire slender, much produced, whorls short, numerous, rounded; last much compressed beneath, keeled, striated below the keel, shortly uncoiled; aperture subtrigonal, laterally shortly produced; columella very slightly plaited.

GÜNDLACH. MS. Pfeiffer in Malak. Bl. viii. 1860, p. 20.

Hab. Baracoa, Cuba.

Species 35. (Mus. Brit.)

CYLINDRELLA GOSSEL. *Cyl. testâ pallidè fulvâ; tenuiter acutè striatâ, subpyramidatâ, versus apicem gradatim attenuatâ, infusâ medium vix inflatâ; anfractibus rectiusculis, ultimo infusâ carinatâ, subcontracto, infusâ carinam subexcavatâ; aperturâ magnâ, ovatâ, columellâ plicatâ.*

GOSSEL'S CYLINDRELLA. Shell pale fulvous; finely acutely striated, subpyramidal, gradually attenuated towards the apex, very little inflated below the middle; whorls rather straight, the last keeled below, slightly contracted, somewhat excavated below the keel; aperture large, ovate, columella plaited.

PFEIFFER. Chem. p. 70.

Hab. Jamaica.

Species 36. (Mus. Brit.)

CYLINDRELLA ELEGANS. *Cyl. testâ subfusiformi, rubro-fulvâ, levî, medio subinflatâ; anfractibus brevibus, paulò convexis, ultimo obliquè soluto, declivi; aperturâ obliquè ovatâ, margine incrassatâ, expansâ, columellâ intus leviter plicatâ.*

THE ELEGANT CYLINDRELLA. Shell subfusiform, reddish-brown, smooth, slightly inflated in the middle, whorls short, a little convex, the last obliquely uncoiled, sloped downwards; aperture obliquely ovate, margin thickened, expanded; columella very slightly plaited within.

PFEIFFER. Chem. p. 23.

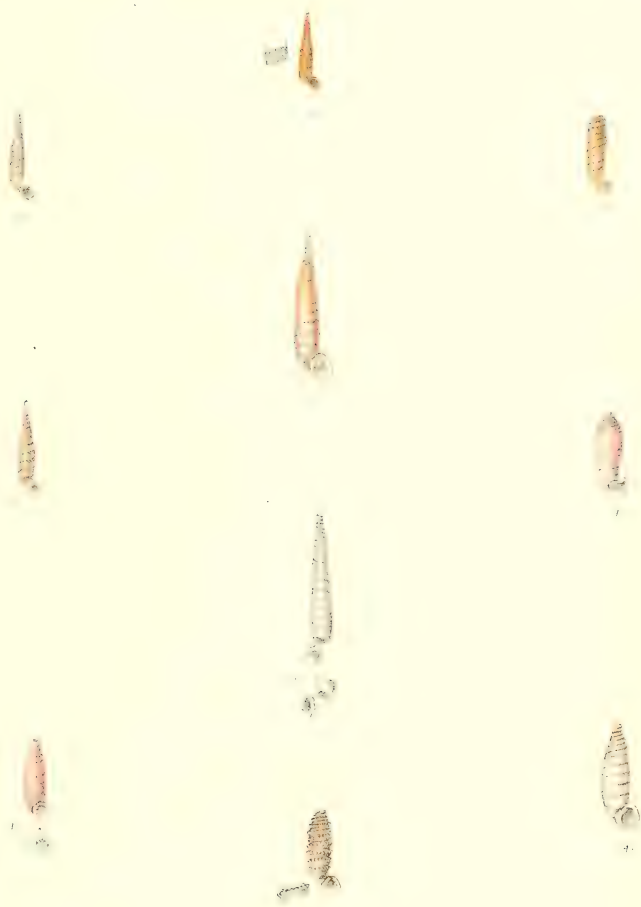
Pupa oborta, Menke.

Pupa litans, Gould.

Pupa Auberiana, Orbigny.

Cylindrella nobilis, Steutz.

Hab. Western part of Cuba.



CYLINDRELLA.

PLATE V.

Species 37. (Mus. Brit.)

CYLINDRELLA HANLEYANA. *Cyl. testā parvā, tenui, fusca, subpyramidalit, angustā, nullo vix inflatā, versū apicem contractā; anfractibus angustis, mucrosis, rectiusculis, liris tenuibus, arcuatis sculptis; ultimo convexiusculo, infri acutē carinato, versū aperturam longē soluto; aperturā remotā, subquadratā, declivi.*

HANLEY'S CYLINDRELLA. Shell small, thin, brown, rather pyramidal, narrow, scarcely inflated in the middle, contracted towards the apex; whorls narrow, numerous, rather straight, sculptured with fine curved ridges; the last rather convex, sharply keeled below, much uncoiled; aperture remote, rather square, sloped downwards.

PEIFFER. Chemnitz, p. 42, Monog. iv. 152.

Hab. Venezuela, New Grenada.

A neatly sculptured little shell.

Species 38. (Mus. Brit.)

CYLINDRELLA CHORDATA. *Cyl. testā parvā, albā, tenui, subfusiformi, angustā, medio inflatā; anfractibus 14, liris obliquē subarcuatis distantibus valdē sculptis, ultimo longē soluto, infri valdē carinato, versū aperturam declivi; aperturā anticē biangulatā, superne recto.*

THE CHORDED CYLINDRELLA. Shell small, white, thin, rather fusiform, narrow, inflated in the middle; whorls fourteen, sculptured with obliquely rather arched, distant, strong ridges; the last much uncoiled, sloped downwards towards the aperture; aperture anteriorly biangular, straight above.

PEIFFER. Chem. p. 48, Monog. 1866, No. 202.

Hab. Isl. St. Croix.

An exquisitely beautiful little white species.

Species 39. (Mus. Brit.)

CYLINDRELLA CRISPULA. *Cyl. testā pupiformi, fuscā, regulariter lirata, superā medium inflatā, infri valdē ad ultimam anfractum gradualim attenuatā; ultimo anfractu parvā, paulō soluto; aperturā obliquē oblongā, quadrangulatā.*

THE LITTLE CRISP CYLINDRELLA. Shell fusiform, brown, regularly ridged, inflated above the middle; thence gradually attenuated towards the last whorl; last whorl small, slightly uncoiled; aperture obliquely oblong, with four angles.

PEIFFER. Monograph ii. 377.

Hab. Cuba.

Species 40. (Mus. Brit.)

CYLINDRELLA SALLEANA. *Cyl. testā elongatā, subpyramidalit, fusco-cornuā, tenuiter obliquē striatā; anfractibus angustis 18, quarum 6 apicalibus albis, coarctatis, medianis convexiusculis, altis versū aperturam vix angustatis; ultimo contracto, sub-soluto, infri carinato; aperturā productā, angustā, labio expanso, infri biangulatā.*

SALLE'S CYLINDRELLA. Shell elongated, subpyramidal, horny-brown; finely obliquely striated; whorls narrow, eighteen, of which the six apical are white and narrowed, rather convex, the middle ones a little convex, the others slightly narrowed towards the aperture; aperture produced, large, with expanded lip, biangular below.

PEIFFER. Chem. p. 38.

Hab. Haiti.

Species 41. (Mus. Brit.)

CYLINDRELLA TRINITARIA. *Cyl. testā succineo-cornuā, tenui, gracili, subdiaphanā, medio subinflatā, superne attenuatā; anfractibus angustis, convexis, tenuiter liratis; ultimo basi acutē carinato, infri carinam concavo, anticē longē soluto, obliquē declivo; aperturā remotā obliquē ocatā, anticē biangulatā.*

THE TRINITY ISLAND CYLINDRELLA. Shell amber-horn, thin, slender, rather diaphanous, slightly inflated in the middle, attenuated above, whorls narrow, convex, finely ridged; the last sharply keeled at the base, concave below the keel, anteriorly much uncoiled, obliquely bent downwards.

PEIFFER. In Malak. Bl. vii. 1860.

Hab. Trinity Island.

April, 1875.

CYLINDRELLA.—PLATE V.

Species 42. (Mus. Brit.)

CYLINDRELLA MICROSTOMA. *Cyl. testâ subperforatâ, pupaeformi, cretaceâ; suprà medium inflatâ, inde versus ultimum anfractum gradatim attenuatâ; anfractibus angustis, numerosis, ultimo contracto, infrà excavato; aperturâ parvâ, verticali, subtrigona.*

THE SMALL-MOUTHED CYLINDRELLA. Shell slightly perforated, pupa-shaped, chalky; inflated above the middle, thence gradually attenuated towards the last whorl; whorls narrow, numerous, the last contracted, excavated below; aperture small, vertical, subtrigonal.

PFEIFFER. Proc. Zool. Soc. 1861, p. 27.

Hab. —?

A curious little pupaeform shell, which has the greatest inflation above the middle of its length.

Species 43. (Mus. Brit.)

CYLINDRELLA AGNESIANA. *Cyl. testâ elongatâ, cylindricâ, angustâ, albidâ, tenuiter striatâ; anfractibus 18, sinistrorsis, convexiusculis; ultimo recto, infrà carinato, infrà carinam excavato, versus aperturam longè soluto, bicarinato, valdè depresso, aperturâ remotâ, obliquè subquadratâ, margine interno rotundo, labio externo biangulato.*

THE AGNESIAN CYLINDRELLA. Shell elongated, cylindrical, narrow, whitish, finely striated; whorls eighteen, sinistral, rather convex; the last straight, keeled below, excavated below the keel, uncoiled some length towards the aperture, much bent downwards; aperture remote, obliquely subquadrate, inner margin round, outer lip biangular.

ADAMS, C. B. Chem. p. 38.

Hab. Jamaica.

A graceful white shell.

Species 44. (Mus. Brit.)

CYLINDRELLA MONTANA. *Cyl. testâ brevi, rectiusculâ, rosâ, tenuiter striatâ; ultimo anfractu angustato,*

rotundato, lateraliter soluto; aperturâ subrotundâ, subremotâ, margine crassiusculo, rotundo.

THE MOUNTAIN CYLINDRELLA. Shell short, rather straight, pink, finely striated; last whorl narrow, rounded, laterally uncoiled; aperture rather round, rather distant, margin rather thick, round.

C. B. ADAMS. Chem. p. 29.

Cylindrella rosca, var., Pfeiffer.

Hab. Jamaica.

Species 45. (Mus. Brit.)

CYLINDRELLA TERES. *Cyl. testâ crassiusculâ, levigatâ, subpyramidatâ, albâ, supernè fuscâ, attenuatâ; anfractibus convexiusculis, ultimo paulò angustato, infrà subcarinato, infrà carinam excavato; aperturâ proximâ magnâ, subrotundâ; columellâ supernè subcylindricâ.*

THE TAPER CYLINDRELLA. Shell rather thick, smooth, rather pyramidal, white; brown above, attenuated; whorls rather convex, the last a little narrowed, slightly keeled beneath, hollowed beneath the keel; aperture approximate, large, rather rounded; columella with a slight callosity above.

MENEZ. (Holospira) Chem. p. 56.

Hab. Cuba.

Species 46. (Mus. Brit.)

CYLINDRELLA SEMINUDA. *Cyl. testâ parvâ, gradatoturritâ, pupaeformi; anfractibus scalariformibus supernè angulatis; ad angulum prominentè noduloso-squamatis; ultimo infrà angustato, lateraliter longè soluto; aperturâ remotâ, latere columellari rotundâ, latere externo angulatinè acuminato.*

THE HALF-NUDE CYLINDRELLA. Shell small, pupa-shaped; whorls angular above, prominently nodulose squamose at the angle; the last narrowed below, laterally much uncoiled; aperture remote, rounded on the columellar side, angularly acuminate at the inner side.



CYLINDRELLA.

PLATE VI.

Species 47. (Fig. *a, b*, Mus. Sowerby.)

CYLINDRELLA ELLIOTT. *Cyl. testā angustissimē cylindraceā, purpureo-fusca, tubulis albis angulatis suprà medium anfractuum prominentibus continuis ornata; anfractibus numerosis, angustis; ultimo lateraliter obliquē soluto; aperturā remotā, parvā, subrotundā.*

ELLIOTT'S CYLINDRELLA. Shell very narrowly cylindrical, purple-brown, ornamented with white angular tubes, prominent above the middle of the whorls; whorls numerous, narrow; last laterally obliquely uncoiled; aperture remote, small, rather round.

POLY. Mon. Cuba.

Hab. Cuba.

The tubes or hollow varices continued from whorl to whorl up the spire of this shell make it a remarkably interesting species.

Species 48. (Mus. Sowerby.)

CYLINDRELLA PILOCELI. *Cyl. testā subcervicæ-albā, tenuiter lirata, pupæformi, medio et infri rectā, suprà medium inflatā, inde versūs apicem contractā, anfractibus numerosis, angustis, ultimo parvo, infri angulato, infri angulum lævigato, medio rimato; aperturā proximā, minusculā, superne subquadratā.*

PILOCELI'S CYLINDRELLA. Shell bluish-white, finely ridged, pupa-shaped, straight at the middle and below; inflated above the middle, thence contracted towards the apex; whorls numerous, narrow; the last small, angular below, smooth below the angle, notched in the middle; aperture near, rather large, rather square above.

PFEIFFER. Chem. p. 64, Mon. ii. 382.

Hab. Mexico.

Species 49. (Mus. Sowerby.)

CYLINDRELLA ARCUATA. *Cyl. testā brevī, ventricosā, liris tenuibus, subliantibus, eleganter arcuatis*

ornatā suprà medium inflatā; anfractibus 8, rix convexis; suturā profundē excavatā; ultimo anfractu angusto, crenulatum carinato, infri carinam concavo, medio rimato; aperturā subquadratā, marginē expanso.

THE ARCHED CYLINDRELLA. Shell short, ventricose, ornamented with thin, rather distant elegantly curved ridges; inflated above the middle; whorls eight, scarcely convex, with deeply excavated suture; last whorl narrow, crenulated, keeled, concave below the keel, notched in the middle; aperture rather square, with expanded margin.

WEINLAND AND MARTENS. Malak. Bl. vi. 1859.

Hab. Hain.

Species 50. (Mus. Sowerby.)

CYLINDRELLA SAUVALLIANA. *Cyl. testā brevitatā, fusco-cornea, angustā cylindricā, propē apicem pyramidalitā; anfractibus altis, infri lineā rubrā angulatā; aperturā proximā, magnā, marginē tenui, expanso.*

SAUVALLI'S CYLINDRELLA. Shell smooth, horny-brown, narrowly cylindrical, pyramidal near the apex; whorls elevated, belted below with a red line; aperture near, large, margin thin, expanded.

GÜNDLACH. Chem. p. 64, Pfeiffer. Monog. iv. 710.

Hab. Cuba.

A smooth elevated species with a pretty red line at the bottom of the whorls partly hidden by the suture.

Species 51. (Mus. Sowerby.)

CYLINDRELLA WALPOLEI. *Cyl. testā magnā, epidermide olivaceo-fusca indutā, cylindraceo-subpyramidalitā, tenuiter obliquē striatā, anfractibus altis paulō convexis; ultimo declivi, versūs apicem angulatā, post aperturam profundē rimato; aperturā paulō larvā, perpendiculariter oratā, columellā uniplicatā.*

WALPOLE'S CYLINDRELLA. Shell large, covered with an olive-brown epidermis, cylindrically subpyrami-

CYLINDRELLA.—PLATE VI.

dal, finely obliquely striated; whorls elevated, a little convex; last sloped, narrowed towards the axis, deeply notched behind the aperture; aperture a little uncoiled, perpendicularly ovate; columella with a plait.

SOWERBY.

Hab. — ?

Species 52. (Mus. Sowerby.)

CYLINDRELLA BROOKESIANA. *Cyl. fusiformi, tenui, gracili, corned, obliquè tenuiter striatâ; anfractibus convexiusculis, ultimo longissimè soluto, carinato, flexuoso, subspiraliter descendenti; aperturâ longè remotâ, subcirculari, margine expanso.*

THE BROOKESIAN CYLINDRELLA. Shell fusiform, thin, slender, horny, obliquely finely striated; whorls rather convex, the last uncoiled a great length, keeled, flexuous, rather spirally descending; aperture very remote, rather rounded, with expanded margin.

GUNDLACH. MS. Pfeiffer in Malak. Bl. vi. 1859.

Hab. Monte Libano, Isl. of Cuba.

Species 53. (Mus. Sowerby.)

CYLINDRELLA NOBILEOR. *Cyl. testâ cylindricâ, tenuiter striatâ, cornco-subrosâ; anfractibus vicè convexis,*

supernè ad suturam rubro teniatis; anfractu ultimo brevi, infra rimato, breviter soluto; aperturâ productâ, fulvâ, ad marginem subexpansâ, columellâ internè latâ, subplicatâ.

THE NOBLER CYLINDRELLA. Shell cylindrical, finely striated, horny-pinkish; whorls scarcely convex, banded with pink above at the suture; last whorl short, notched below, shortly uncoiled; aperture produced, fulvous, a little expanded at the margin, columella broad within, with a slight plait.

ADAMS. Chem. p. 9.

Cylindrella Binneyana, Pfeiffer.

Hab. Jamaica.

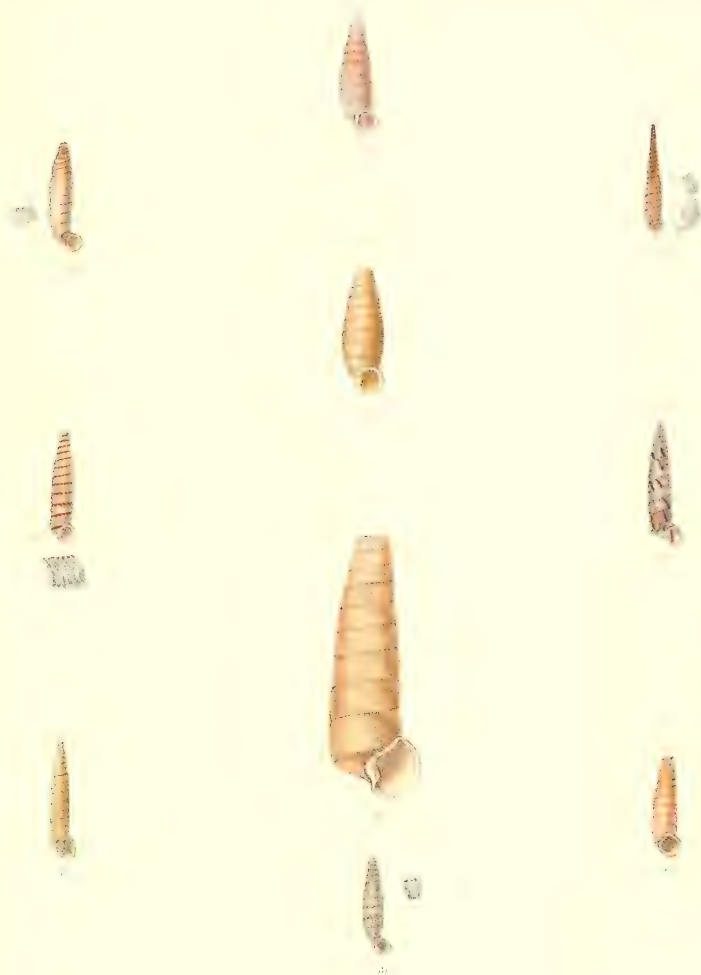
Species 54. (Mus. Sowerby.)

CYLINDRELLA MEGACHEILA. *Cyl. testâ roseo-corned, cylindricâ, ventricosâ, tenuissimè striatâ; anfractibus brevibus, supernè ad suturam rubro teniatis, ultimo profundè rimato; aperturâ annexâ, magnâ, supernè subquadratâ; margine rotundo, expanso.*

THE LARGE-THROATED CYLINDRELLA. Shell horny-rose, cylindrical, ventricose, very finely striated; whorls short, with a red band above at the suture; last whorl deeply notched; aperture annexed, large, rather square above, margin rounded, expanded.

CHITTY. Shells of Jamaica.

Hab. Jamaica.



CYLINDRELLA.

PLATE VII.

Species 55. (Mus. Brit.)

CYLINDRELLA STIMATELLA. *Cyl. testâ rimatâ, pyramidalato-cylindraceâ, solidâ, tenuissimè oblique striatâ, laevi, cornu, medio rubescenti, usque ad medium subcylindricâ, deinde ad apicem lentè attenuatâ, anfractibus brevissimâ; rectiusculis; aperturâ subrotundâ, intus subroseâ; columellâ rîe plicatâ.*

THE FINELY STRIATED CYLINDRELLA. Shell notched, pyramidal, cylindrical, rather solid, very finely obliquely striated, smooth, horny, a little red in the middle; cylindrical up to the middle, afterwards slowly attenuated; whorls rather short, rather straight; aperture rather rounded, a little rosy within; columella scarcely plaited.

WRIGHT. MS. Pöföler, Malak. Bl. xi. p. 246.

Hab. The western part of the Isl. of Cuba.

Species 56. (Mus. Sowerby.)

CYLINDRELLA JAVALLIANA. *Cyl. testâ fulvo-cornu, tenui, sculpellucidâ, angustâ, elongatâ, cylindricâ, rimatâ; anfractibus brevibus, numerosis, convexiusculis; ultimo rotundo, contracto, soluto; aperturâ subrotundâ, columellâ rectiusculâ.*

JAVALL'S CYLINDRELLA. Shell fulvous horn, thin, semi-pellucid, narrow, elongated, cylindrical, notched; whorls short, numerous, rather convex; the last rounded, contracted, uncoiled; aperture rather distant, columella rather straight.

ORBIGNY. Shells of the Isl. of Cuba.

Hab. Cuba.

The whorls of this cylindrical little species are peculiarly short.

Species 57. (Mus. Sowerby.)

CYLINDRELLA POLYGALA. *Cyl. testâ purâ, fusâ, elongatâ, angustissimâ, versis apicem fuscâ, gradatim attenuatâ, medio paulo inflato, anfractibus 20, brevibus, liris arcuatis ornatis, ultimo rimato, longè soluto; aperturâ subtrigona remotâ, margine superne recto.*

THE MANY-WHOELED CYLINDRELLA. Shell small, elongated, very narrow, gradually attenuated towards the apex, a little inflated in the middle; whorls twenty, short, ornamented with curved ridges; last notched, with a long portion uncoiled; aperture rather trigonal, remote, margin straight above.

PEIFFER. Monog. iv. p. 206.

Hab. Cordova, Mexico.

Species 58. (Mus. Sowerby.)

CYLINDRELLA LATA. *Cyl. testâ rimatâ, cylindricâ, ventricosâ, cornu-rubescens, tenuiter oblique lirata; anfractibus brevissimâ, tenuâ rubrâ superne ad suturam cinctis, ultimo soluto, infâ carinato; aperturâ disjunctâ, productâ, fuscâ, columellâ uniplicatâ, margine rotundè reflexo, expanso.*

THE BROAD CYLINDRELLA. Shell notched, cylindrical, ventricose, reddish-horn, finely obliquely ridged; whorls rather short, belted above at the suture with a red band, last uncoiled, keeled below; aperture disconnected, produced, fulvous, columella single-plaited, margin roundly reflected, expanded.

A. B. ADAMS. Chemn. 22. Pöf. Monog. iii. 567.

Hab. Jamaica.

Resembling *Cylindrella Binneyana* and others in general appearance, but with the mouth detached and produced.

Species 59. (Mus. Brit.)

CYLINDRELLA MORELETI. *Cyl. testâ elongato-cylindricâ, angustâ, rîe rimatâ, cornu-rubescens, pallidè variegatâ, tenuiter undatim rugatâ, anfractibus sublevis, convexiusculis, infâ lineâ rubrâ tenuatâ, ad suturam crenatis; aperturâ obliquâ; columellâ uniplicatâ.*

MORELET'S CYLINDRELLA. Shell elongate-cylindrical, narrow, scarcely notched, reddish-horn, pale-variegated, finely wavyly wrinkled, whorls rather raised, rather narrow, banded at the lower part

April, 1875.

CYLINDRELLA.—PLATE VII.

with a red line, crenated at the suture; aperture oblique, columella single-plaited.

PFEIFFER. Chemn. p. 16. Monograph iii. 566.

Hab. —?

Species 60. (Mus. Brit.)

CYLINDRELLA VIOLACEA. *Cyl. testâ solidiusculâ, subcylindricâ, angustâ, purpureo-variegatâ, filo-lirâtâ, infâ rimatâ, anfractibus connexis, distinctis; ultimo obliquè soluto; aperturâ semicirculari, margine interno rectiusculo; columellâ leviter uniplicatâ.*

THE VIOLET CYLINDRELLA. Shell rather solid, rather cylindrical, narrow, variegated with purple, with thread-like ridges; notched below, whorls convex, distinct; the last obliquely uncoiled; aperture semicircular; inner margin nearly straight; columella with a slight plait.

WRIGHT. MS. Pfeiffer, Malak. Bl. xi. 1864, p. 128.

Hab. West Cuba.

Species 61. (Mus. Brit.)

CYLINDRELLA MEXICANA. *Cyl. testâ magnâ, cylindrico-subpyramidatâ, stramineâ, ventricosâ, tenuiter striatâ; anfractibus rectiusculis, paulò connexis, ultimo infâ subcarinato, infâ carinam brevigato; aperturâ subauriformi, infâ cuneatâ, columellâ tortuâ, plicatâ.*

THE MEXICAN CYLINDRELLA. Shell large, cylindrical, subpyramidal, straw-coloured, ventricose, finely ridged; whorls rather straight, a little convex, the last keeled below, smooth below the keel; aperture somewhat auriform, cuneate below, columella tortuous, plicated.

CUMING. MS. Pfeiffer. Proc. Zool. Soc. 1860.

Hab. Mexico.

Species 62. (Mus. Brit.)

CYLINDRELLA ACES. *Cyl. testâ corned, semipellucidâ, angustâ cylindricâ, versis apicem pyramidatâ, laxigatâ; anfractibus superioribus laxissimis inferioribus*

bus filo-liratis; ultimo infâ validè carinato, infâ carinam rimato, excavato; aperturâ subquadratâ infâ labium externum cuneato, columellâ leviter uniplicatâ.

THE SPEAR CYLINDRELLA. Shell horny, semipellucid, narrowly cylindrical, pyramidal towards the apex, smooth, upper whorls very smooth, lower with thread-like ridges; last strongly keeled below, notched below the keel, excavated; aperture rather square, outer lip cuneate below, columella with a slight plait.

PFEIFFER. Monograph ii. No. 383.

Hab. Cuba.

Species 63. (Mus. Brit.)

CYLINDRELLA AGUSTÆ. *Cyl. testâ cylindricâ, angustâ, subrosâ, tenuissimè striatâ, anfractibus rectiusculis, infâ angustè tenuiatâ; aperturâ connexâ, margine albido, rotundo.*

AGUSTA'S CYLINDRELLA. Shell cylindrical, narrow, rather rose-coloured, very finely striated, whorls rather narrow, with a narrow band below; aperture connected, margin white, rounded.

C. B. ADAMS. Pfeiffer. Monog. iii.

Hab. Jamaica.

Species 64. (Mus. Brit.)

CYLINDRELLA INTUSMALLEATA. *Cyl. testâ subfusiformi, albâ, angustâ, elongatâ, medio paulò ventricosâ; anfractibus brevibus, distanter validè costatis, costis subulstantibus, medio anfractuina nullis; ultimo anfractu infâ carinato, subrimato, obliquè soluto; aperturâ remotâ, obliquè ovali, margine rotundo.*

THE HAMMERED CYLINDRELLA. Shell somewhat fusiform, white, elongated, a little ventricose in the middle; whorls short, distantly strongly ribbed; ribs rather distant, flattened in the middle of the whorls; last whorl keeled below, with a slight notch; aperture removed, obliquely ovate with rounded margin.

GUNDLACHIE.—Pfeiffer, Monog. iv. 705.

Hab. Cuba.



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

CYLINDRELLA.

PLATE VIII.

Species 65. (Mus. Sowerby.)

CYLINDRELLA TUMIDIORA. *Cyl. testā tenui, fulvā, fusco-corneo variegatā, subpyramidalā; anfractibus brevibus, convexiusculis ad suturam leviter crenatis, infra angustissimē rubro teniatīs, ultimo rimato; aperturā auctā, anticē productā, expansā, supra medium subcontractā.*

THE MORE TUMID CYLINDRELLA. Shell thin, fulvous, variegated with horny brown, rather pyramidal; whorls short, rather convex, slightly crenated at the suture, with a very narrow red band below, the last notched; aperture connected, anteriorly produced, expanded, a little contracted above the middle.

SOWERBY.

Hab. Cuba.

The whorls are much shorter and more convex than in *Cylindrella irrorata*.

Species 66. (Fig. a, b, Mus. Brit.)

CYLINDRELLA GARCIANA. *Cyl. testā brevi, cylindricā, minutē lineatā, fulvā vel albā; anfractibus rectiusculis, medianis vix inflatis, ultimo infra validē carinato, infra carinam excavato, vix rimato, brevissimē soluto; aperturā magnā, ovatā, subdisjunctā, columellā simplicī.*

GARCIA'S CYLINDRELLA. Shell short, cylindrical, minutely ridged, fawn-coloured or white; whorls rather straight, the middle ones very little inflated in the middle, the last strongly keeled, hollowed below the keel, scarcely notched, very shortly uncoiled; aperture large, oval, a little disjoined, columella simple.

WRIGHT. MS. Pflr. Mal. Bl. xiii.

Hab. Isl. of Cuba.

Species 67. (Mus. Brit.)

CYLINDRELLA CARINATA. *Cyl. testā angustā, elongatā, subcylindricā, corneo-rubescētī, levigatā; anfractibus elevatis, rectiusculis, tenuiter striatis, ultimo breviter soluto, infra subcontracto, validē carinato, infra carinam excavato, rimato; aperturā obliquē ovatā, productā.*

THE KEELED CYLINDRELLA. Shell narrow, elongated, subcylindrical, reddish-horn, smooth; whorls elevated, rather straight, finely striated, the last shortly uncoiled, a little contracted below, with a strong keel, excavated, notched; aperture obliquely ovate, produced.

PEIFFER. Monographia Helicorum, iii. p. 574.

Hab. — ?

The last whorl is rather rounded, then contracted and terminated by a very strong keel, between which and the inner edge of the aperture there is a narrow excavation.

Species 68. (Mus. Brit.)

CYLINDRELLA CYLINDRUS. *Cyl. testā angustatā, elongatā, rubrā, supra medium lentissimē attenuatā; anfractibus levibus, ut latera rectissimis, ultimo convexiusculo, infra carinam excavato; aperturā perpendiculariter ovatā.*

THE CYLINDER CYLINDRELLA. Shell narrow, elongated, red, very slowly attenuated; whorls raised, smooth, very straight, the last rather convex, keeled below, excavated under the keel, aperture perpendicularly ovate.

CHEMNITZ. New Ed. p. 6. Pfeiffer Monog. ii. p. 6.

Pupa cylindrica, purpurea, Gray.

Pupa rubella, rosea, C. B. Adams.

Cylindrella procrea, C. B. Adams.

Hab. Jamaica.

A narrow shell with straighter whorls than *Cylindrella carinata*, with the keel on the last whorl less prominent.

Species 69. (Mus. Brit.)

CYLINDRELLA DUNKERIANA. *Cyl. testā angustissimā, elongatā, corneo-rubescētī, levigatā, medio vix inflatā; anfractibus elevatis, ad latera rectiusculis, ultimo elevatissimo, ad latera concavo, subcontracto, infra angulato; aperturā connexā, obliquē ovatā, anticē subproductā, subcaminatā.*

April, 1875.

CYLINDRELLA.—PLATE VIII.

DUNKER'S CYLINDRELLA. Shell very narrow, elongated, reddish-horn, smooth, very little inflated in the middle; whorls elevated, rather straight at the sides, the last very elevated, concave at the sides, a little contracted, angular below; aperture connected, obliquely ovate, anteriorly a little produced and acuminate.

DUNKER. Chemn. p. 67.

Hab. Jamaica.

Species 70. (Mus. Brit.)

CYLINDRELLA FABREANA. *Cyl. testā albā, diaphanā, subpupæformi, medio subinflato, anfractibus convexiusculis, liris tenuibus oblique arcuatis, distantibus, ornatis, ultimo elevato, subcontracto, subrotundo, rimato, breviter soluto, tenuiter unicarinato; aperturā subrenotā, oblique producta, margine unilique expansa, columellā oblique uniplicatā.*

FABRE'S CYLINDRELLA. Shell white, transparent, rather pupæform, a little inflated in the middle; whorls convex, ornamented with thin, obliquely curved, distant ridges; last elevated, a little contracted, a little rounded, notched, shortly uncoiled, with a thin keel; aperture a little removed, obliquely produced, margin expanded all round, columella with an oblique fold.

POEY. MS. Pfeiffer, Malak. Bl. vi. 1859.

Hab. "Leborcaul de San Antonio." Cuba.

Species 71. (Mus. Brit.)

CYLINDRELLA INTERRUPTA. *Cyl. testā fuscā, cylindricā, subpupæformi, suprà medium subinflatā, infri paulō contractā, anfractibus brevibus, convexiusculis, costis distantibus prominentibus, medio anfractu interruptis sculptis; ultimo anfractu puro, rimato, oblique longè soluto; suturā profundā; aperturā oblique ovali, parvā, margine subrepensō.*

THE INTERRUPTED CYLINDRELLA. Shell brown, cylindrical, slightly pupa-shaped, a little inflated above

the middle; a little contracted below; whorls short, rather convex sculptured with distant prominent ribs interrupted in the middle of the whorls, last whorl small, notched, with a large part obliquely uncoiled; suture deep, aperture obliquely ovate, small, with expanded margin.

GUNDLACH. Chemn. p. 29, Pfeiffer. Mon. iv. 705.

Hab. Cuba.

The rib is nearly, if not quite obliterated in the middle of each whorl.

Species 72. (Mus. Brit.)

CYLINDRELLA GONIOSTOMA. *Cyl. testā, pupæformi, elongatā, cornēā, tenuiter, distanter et oblique filistriatā; suprà medium paulō inflatā; apice obtuso, infri subattenuatā; anfractibus convexiusculis, brevibus, ultimo rimato, soluto; aperturā subtrigonā, supernè biangulatā; margine angusto, rotundo.*

THE ANGLE-MOUTHED CYLINDRELLA. Shell pupa-shaped, long, horny, with fine, distant, oblique thread-like striae, a little inflated above the middle; apex obtuse, a little attenuated beneath; whorls a little convex, short, the last notched, uncoiled; aperture rather trigonal, with two angles above; margin narrow, rounded.

PFEIFFER. Chemn. p. 63. Monog. iv. p. 740.

Species 73. (Mus. Brit.)

CYLINDRELLA OBESA. *Cyl. testā brevi, ventricosā, solidiusculā, rubro-succinēā, tenuiter striatā, anfractibus 5, convexiusculis; aperturā magnā, rotundā, connexā margine crasso, rotundo.*

THE STOUT CYLINDRELLA. Shell short, ventricose, rather solid, reddish-amber, finely striated, whorls five, rather convex; aperture large, rounded, connected with thick, rounded margin.

WEINLAND AND MARTENS. Malak. Bl. vi. 1859, p. 55.

Hab. Haiti.



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83

CYLINDRELLA.

PLATE IX.

Species 74. (Mss. Sowerby.)

CYLINDRELLA SCALARIXA. *Cyl. testâ pallidâ fuscâ, pupâformi; anfractibus 12, costis obliquis, crassis, approximatis natis, superioribus parvis, mediânis latis, inglatis, inferioribus angustis; ultimo longè lacato; aperturâ subtransversâ, margine crasso, rotundo.*

THE SCALARIFORM CYLINDRELLA. Shell pale fulvous, pupa-shaped; whorls 12, provided with oblique, thick, approximate ribs, superior small, middle broad, inflated, lower narrow; last much uncoiled; aperture subtransverse, margin thick, rounded.

SHUTTLEWORTH. Pfr. Mon. VI., No. 209.

Hab. Cuba.

Species 75. (Mss. Sowerby.)

CYLINDRELLA SOLITA. *Cyl. testâ fusiformi, solidiusculâ, minute striatâ, pallidâ coracâ; anfractibus 11, convexiusculis; ultimo infusâ angustato, longè lacato, aperturâ obliquâ, circulari, margine subexpanso.*

THE UNCOILED CYLINDRELLA. Shell fusiform, rather solid, finely striated, pale horn; whorls 11, rather convex; last narrowed below, uncoiled some length, aperture oblique, circular, margin slightly expanded.

PFEIFFER. Malak. Vol. XI., 1863.

Hab. West Cuba.

Species 76. (Mss. Brit.)

CYLINDRELLA HOLLANDI. *Cyl. testâ rectiusculâ, subcylindricâ, pallidâ fuscâ, medio anfractuâ fusco fasciatâ; anfractibus permanentibus decem, ultimis, rectilateralibus; aperturâ approximâtâ, perpendiculariter oblongâ.*

HOLLAND'S CYLINDRELLA. Shell rather straight, rather cylindrical, pale fulvous, banded with brown in the middle of the whorls; permanent whorls ten, rather high, straight-sided; aperture approximate, perpendicularly oblique.

ADAMS, C. B. Pfr. Mon. VI., p. 369.

Hab. Jamaica.

Species 77. (Mss. Sowerby.)

CYLINDRELLA TRANSAPERTA. *Cyl. testâ latâ, subcylindricâ, subfusâ, tenuissimè striatâ; anfractibus permanentibus 9-10, rectilateralibus, superioribus angustis; ultimo subquadrato, longè rimato; aperturâ transversâ oblongâ; labio interno ciliatâ, crasso, albo.*

THE CROSS-MOUTHED CYLINDRELLA. Shell broad, subcylindrical, brownish, very finely striated; permanent whorls 9 or 10, straight-sided, upper narrow; last rather square, with a long notch; aperture transversely oblong; inner lip touching, thick, white.

SOWERBY.

Hab. — ?

The inner margin of the mouth touches the middle of the last whorl, across which it is extended.

Species 78. (Mss. Sowerby.)

CYLINDRELLA GRACILIS. *Cyl. testâ sinistrali, albâ, altissimâ, elongatâ, subfusiformi, tenuissimè striatâ; anfractibus 18, obliquis, convexis, gradatim crescentibus; ultimo subarcuato; aperturâ magnâ, ovatâ, columellâ plicatâ.*

THE SLENDER CYLINDRELLA. Shell sinistral, white, very high, elongated, subfusiform, very finely striated; whorls 18, oblique, convex, gradually increasing; last slightly keeled; aperture large, ovate, columella plaited.

WOOD. Pfr. Monog. VI., p. 383.

Hab. Jamaica.

Mentioned at No. 33 as a var. of *Cy. oblonga*; but it is much more elongated.

Species 79. (Mss. Sowerby.)

CYLINDRELLA MULTISPIRALIS. *Cyl. testâ elongatissimâ, angustâ, fuscâ; anfractibus 24, rectiusculis; ultimo longè lacato; aperturâ distantâ, subovâtâ.*

THE MULTISPIRAL CYLINDRELLA. Shell very long.

CYLINDRELLA.—PLATE IX.

narrow, fawn; whorls 24, rather straight; last loosened some length; aperture distant, subovate.

SOWERBY?

Hab. —?

The writer has the name with the shell in MS., but does not find it in Pfeiffer's Monograph.

Species 80. (Mus. Sowerby.)

CYLINDRELLA TROCHLEFORMIS. *Cyl. testâ brevi, latâ, densè striatâ, roseâ, spirâ subconicâ; anfractibus permanentibus 7, tribus inferioribus latissimis; ultimo longè rimato; aperturâ magnâ, obliquâ, labio interno producto.*

THE TROCHLEFORM CYLINDRELLA. Shell short, broad, closely striated, pink, spire subconical; permanent whorls 7, three lower very broad; last with a long notch; aperture large, oblique, inner lip produced.

SOWERBY.

Hab. —?

Species 81. (Mus. Sowerby.)

CYLINDRELLA ALABASTRINA. *Cyl. testâ albâ, cylindricâ, semipellucidâ, gradatim attenuatâ; anfractibus permanentibus 12, reclilateralibus; ultimo infrâ angulato, longè laxato; aperturâ magnâ, subrotundâ, distantî, margine rotundo.*

THE ALABASTER CYLINDRELLA. Shell white, cylindrical, semipellucid, gradually attenuated; permanent whorls 12, straight-sided; last angular be-

low, with a long notch; aperture large, rather rounded, distant, margin rounded.

PFEIFFER. Monog. VI., p. 375.

Hab. Jamaica.

Species 82. (Mus. Sowerby.)

CYLINDRELLA CLARA. *Cyl. testâ fuleâ, lævigatâ, subfusiformi, versus apicem attenuatâ; anfractibus medio et infrâ subæqualibus, convexiusculis; ultimo costulato breviter laxato, longè rimato; aperturâ obliquâ, majusculâ; margine rotundo, columellâ lamellatâ.*

THE CLEAR CYLINDRELLA. Shell fulvous, smooth, subfusiform, attenuated towards the apex; whorls nearly equal at the middle and under, rather convex; last ribbed, shortly uncoiled, with a long notch; aperture oblique, rather large; margin rounded, columella lamellated.

WRIGHT. Pfeiffer Mon. VI., p. 363.

Hab. Cuba.

Species 83. (Mus. Sowerby.)

CYLINDRELLA VIGNALIENSIS. *Cyl. testâ breviusculâ, subcentricosâ, carneo-caruleâ, sursim subattenuatâ, obliquè costulatâ; anfractibus permanentibus septem, altis; ultimo infrâ contracto; aperturâ magnâ, subquadratâ; margine tenui.*

VIGNAL'S CYLINDRELLA. Shell rather short, rather ventricose, ashy-flesh, slightly attenuated upwards, obliquely ribbed; permanent whorls seven, raised; last contracted below; aperture large, rather square; margin thin.

WRIGHT. Pfeiffer Monog. VI., p. 367.

Hab. Cuba.



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94

CYLINDRELLA.

PLATE X.

Species 84. (Mus. Sowerby.)

CYLINDRELLA TENERIENSIS. *Cyl. testâ subvariegatâ, seu albâ, solidiusculâ, confertim arcuato-costulatâ, spirâ supra medium et infra inflatâ; anfractibus permanentibus 11, angustatis, ad suturam crenulatis; ultimo angustato, obliquè rimato, longè soluto; aperturâ distinctâ, obliquè suboblongâ.*

THE TENERIAN CYLINDRELLA. Shell rather variegated, or white, rather solid, closely curve-ribbed, spire inflated above the middle and below; permanent whorls 11, narrow, crenulated at the suture; last narrow, obliquely notched, with long part uncoiled; aperture distant, obliquely rather oblong.

WEIGHT. Pfr. in Malak. Bl. Monog. VI., p. 387.

Hab. La Teneria, West Cuba.

Species 85. (Mus. Sowerby.)

CYLINDRELLA WRIGHTI. *Cyl. testâ altâ, attenuatâ, subfusiformi, obliquè leviter striatâ; anfractibus 20, superioribus angustissimis, mediis converiscentis; ultimo elongato, infra angustato, longè soluto; aperturâ distinctâ, rotundâ, magnâ; margine crassiusculo.*

WRIGHT'S CYLINDRELLA. Shell high, attenuated, subfusiform, obliquely slightly striated; whorls 20, upper very narrow, middle rather convex; last elongated, narrow below, with a lengthened uncoiled portion; aperture distant, rounded, large; margin rather thick.

PEFFER. Malak. Bl. 1862, p. 132.

Hab. Cayo del Ray, Cuba.

Species 86. (Mus. Sowerby.)

CYLINDRELLA LATERADI. *Cyl. testâ elongatâ, sordide fuscâ; anfractibus permanentibus 14, angustis, tenuiter striatis; ultimo subexpanso; infra angulatâ; aperturâ subtrigoniâ; margine tenui.*

LATERAD'S CYLINDRELLA. Shell elongated, dull brown; permanent whorls 14, narrow, finely striated; last rather expanded, angular below; aperture subtrigonal; margin thin.

GRAELOWP (Clansilia). Pfr. Mon. III., p. 574.

Hab. Haiti.

Species 87. (Mus. Sowerby.)

CYLINDRELLA ILAMELLATA. *Cyl. testâ subfusiformi, diaphanâ, pallide corneâ, obliquè striatâ; anfractibus permanentibus 10, mediis et inferioribus inflatis; ultimo paulo contracto; aperturâ obliquè ovalâ; margine crassiusculo; columellâ intus simplici.*

THE UNLAMELLATED CYLINDRELLA. Shell subfusiform, diaphanous, pale horn, obliquely striated; permanent whorls 10, middle and lower inflated; last a little contracted; aperture obliquely ovate, margin rather thick; columella simple within.

WEIGHT. Pfeiffer Mon. Vol. VI., p. 373.

Hab. La Palma, West Cuba.

Species 88. (Mus. Sowerby.)

CYLINDRELLA TEBELATA. *Cyl. testâ brevi, cylindraceâ, albâ, tenui, semipellucidâ; anfractibus permanentibus novem ad decem rectilatis, suturâ crenulatâ; ultimo anfractu subcontracto, rimato; aperturâ majusculâ, obliquè subovalâ.*

THE BROAD CYLINDRELLA. Shell short, cylindrical, whitish, thin, semipellucid; permanent whorls nine or ten, straight-sided, suture crenulated; last whorl subcontracted, notched; aperture rather large, obliquely semioval.

GUNDLACH. Pfeiffer Malak. Bl. VI., 1859.

Hab. Yateras, Cuba.

Species 89. (Mus. Sowerby.)

CYLINDRELLA PRODUCTA. *Cyl. testâ subfusiformi, fuscâ corneâ, levigatâ; anfractibus permanentibus 13, molli et infra suborbitalibus, convexiusculis, superioribus angustis; ultimo leviter soluto; aperturâ majusculâ, suboblongâ.*

THE PRODUCED CYLINDRELLA. Shell rather fusiform, brownish horn, smooth; permanent whorls 13.

CYLINDRELLA.—PLATE X.

middle and lower nearly equal, rather convex, upper narrow; last slightly unwound; aperture rather large, distant.

GUNDLACH. Pfeiffer Mon. Vol. VI., p. 361.

Hab. Cuba.

Species 90. (Mus. Sowerby.)

CYLINDRELLA NOBILIOR. Adams. Species 53. var.

C. Binneyana, Adams.

Species 91. (Mus. Sowerby.)

CYLINDRELLA INTERMEDIA. *Cyl. testā cylindricā, altā, angustā, fuscā, versus apicem contractā; anfractibus permanentibus undecim, striatis, rectiusculis; aperturā paulo disjunctā, magnā, obliquē ovatā; margine crasso.*

THE INTERMEDIATE CYLINDRELLA. Shell cylindrical, high, narrow, brown, contracted towards the apex; permanent whorls eleven, striated, rather straight; aperture a little disjoined, large, obliquely ovate; margin thick.

OWERBY?

Hab. ———?

The writer is obliged to adopt the name, not having the authority.

Species 92. (Mus. Sowerby.)

CYLINDRELLA BRUNNESCENS. *Cyl. testā subfusiformi, fuscā, tenuiter striatā, solidiusculā; anfractibus permanentibus 14, angustis, convexiusculis; ultimo rimato, ad aperturam leviter soluto.*

THE BROWNISH CYLINDRELLA. Shell subfusiform, brown, finely striated, rather solid; permanent whorls 14, narrow, rather convex; last notched, slightly unwound at the aperture.

GUNDLACH. Pfeiffer Mon. Vol. VI., p. 376.

Hab. Cuba.

Species 93. (Mus. Sowerby.)

CYLINDRELLA INTEGRA. *Cyl. testā loricatā, altā, attenuatā, fulvo-cornē; anfractibus scædecim, convexis, obliquis, ultimo soluto; aperturā majusculā, distantī; margine crasso.*

THE ENTIRE CYLINDRELLA. Shell smooth, raised, attenuated, fulvous-horny; whorls sixteen, convex, oblique; last unwound; aperture rather large, distant; margin thick.

PFEIFFER. Mon. Vol. VI., p. 379.

Hab. Cuba.



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103

CYLINDRELLA.

PLATE XI.

Species 94. (Mus. Sowerby.)

CYLINDRELLA RÜSEL. *Cyl. testâ aculeatâ, cornuâ, sursum attenuatâ, medianâ infra rectigoniâ; anfractibus superioribus septenis, angustis, inferioribus septenis subaequalibus, oblique costatis; costis ad suturam tuberculatis; anfractu apicali papilloso, ultimo infra angulato, soluto; aperturâ supernâ subquadratâ, infra oblique subacuminatâ.*

RÜSE'S CYLINDRELLA. Shell aculeated, horny, attenuated above, straight-sided at the middle and under; upper whorls seven, narrow, lower seven nearly equal, obliquely ribbed; ribs tuberculated at the suture; apical whorl papillary, last angular below, unwound; aperture squared above, obliquely acuminated below.

PFEIFFER. Mon. III. p. 378.

Hab. Porto Rico.

Species 95. (Mus. Sowerby.)

CYLINDRELLA COLLARIS. *Cyl. testâ fusâ, subfusiformi, oblique dense costatâ; anfractibus permanentibus 15, concavis, medianis latiusculis, ultimo longius soluto; aperturâ rotundâ, margine crasso, rotundâ.*

THE NECKED CYLINDRELLA. Shell brown, subfusiform, obliquely closely ribbed; permanent whorls 15, convex, middle rather broad, last with a long uncoiled piece; aperture round, margin thick, round.

FERRUSSAC. Pfr. Mon. II. 375.

Cylindrella antiperrera. Pfeiffer.

Pupa truncatula. Sowerby.

Hab. Guadeloupe.

Species 96. (Mus. Sowerby.)

CYLINDRELLA HILLERI. *Cyl. testâ cornuâ, fuscis fuscis semilunaribus variegatâ, tenuiter striatâ, fusiformi, gracili; anfractibus permanentibus quindecim, superioribus angustissimis, rectiusculis, medianis subinglatis; ultimo parvo, longissimè soluto; aperturâ rotundâ, distant, margine subaequali.*

HILLER'S CYLINDRELLA. Shell horny, variegated with brown semilunar bands, finely striated, fusiform, slender; permanent whorls fifteen, upper very

narrow, rather straight, middle rather inflated, last small, with very long portion unwound; aperture round, distant, margin a little expanded.

PFEIFFER. Malak. Bl. IX. 1862, p. 132.

Hab. Cuba.

Species 97. (Mus. Sowerby.)

CYLINDRELLA ANGUSTIOR. *Cyl. testâ subcylindricâ, breviusculâ, cornuâ, anfractibus 19, rectiliteradibus, superioribus contractis, medianis inferioribusque altis, subaequalibus, ultimo infra rimato, angulato; aperturâ magnâ, margine rotundâ.*

THE NARROWER CYLINDRELLA. Shell subcylindrical, rather short, horny; whorls 19, straight-sided, upper contracted, middle and lower high, nearly equal, last notched below, angular; aperture large, margin rounded.

WRIGHT. Pfeiffer. Mon. Vol. VI. p. 384.

Hab. Cayo de San Felipe, Cuba.

Species 98. (Mus. Sowerby.)

CYLINDRELLA ASPERA. *Cyl. testâ fulcâ, fusiformi, supernè contractâ, medio inflatâ, infra subangustatâ; anfractibus quiddecim, oblique dense striatis, ultimo paulo soluto; aperturâ oblique oblongâ, subdistanti, margine rotundâ.*

THE ROUGH CYLINDRELLA. Shell fulvous, fusiform, contracted above, inflated in the middle, a little narrowed below; whorls 15, obliquely densely striated, last a little unwound; aperture obliquely oblong, rather distant, margin rounded.

ADAMS. Shells of Jamaica. Pfeiffer. Mon. Vol. VI. p. 359.

Hab. Jamaica.

Species 99. (Mus. Sowerby.)

CYLINDRELLA INORNATA. *Cyl. testâ brevi cylindricâ, peroblique striatâ; anfractibus novenis, rectiliteradibus, tribus superioribus subangustatis, alteris subaequalibus, ultimo rimato; aperturâ approximâtâ, magnâ, rotundâ, margine rotundâ.*

THE PLAIN CYLINDRELLA. Shell short, cylindrical, very obliquely striated; whorls nine, straight-sided, three upper rather narrow, others nearly

CYLINDRELLA.—PLATE XI.

equal, last notched; aperture approximate, large, rounded, margin round.

ADAMS. Sh. of Jamaica. Pfeiffer. Mon. Vol. VI. p. 377.
Hab. Jamaica.

Species 100. (Mus. Sowerby.)

CYLINDRELLA PORRECTA. *Cyl. testā fulcā, gracili, fusiformi, laevigatā; anfractibus 17, superioribus senis angustissimis, pellucidis, alteris subinflatis, ultimo subcontracto, longē soluto; aperturā obliquā distantī, rotundā.*

THE UPRIGHT CYLINDRELLA. Shell fulvous, slender, fusiform, smooth, whorls 17, upper 6 very narrow, pellucid, others a little inflated, last rather contracted, unwound some length; aperture oblique, distant, round.

GOULD. Pfeiffer. Mon. Vol. VI. p. 384.
Hab. Cuba.

Species 101. (Mus. Sowerby.)

CYLINDRELLA TENELLA. *Cyl. testā fulcā, laevigatā, cylindricā, superiō subattenuatā; anfractibus permanentibus duodecim, rectilateralibus, lentissimē crescentibus, ultimo alto; aperturā magnā, approximātā, obliquē subquadratā.*

THE THIN LITTLE CYLINDRELLA. Shell fulvous, smooth, cylindrical, rather narrowed above; permanent whorls twelve, straight-sided, slowly increased, last high; aperture large, approximate, almost obliquely square.

ADAMS. Pfeiffer. Mon. Vol. VI. 359.
Hab. Jamaica.

Species 102. (Mus. Sowerby.)

CYLINDRELLA NOTATA. *Cyl. testā gracillimā, fusiformi, pellucidā, sublaevigatā, cornuā; anfractibus 17, angustis, convexis, superioribus contractis, apicali rotundo, ultimo vix soluto; aperturā obliquā; margine rotundo.*

THE MARKED CYLINDRELLA. Shell very slender, fusiform, pellucid, rather smooth, horny; whorls 17, narrow, convex, upper contracted, apical round, last hardly unwound; aperture oblique; margin round.

GUNDLACH. MS. Pfeiffer in Malak. Bl. XI. 1863, p. 10.

Hab. — ‘Sierra de Guaira.’ Cuba.

The spiral band above the suture, spoken of in the description, and whence the species derives its name, is not visible in the specimen in our hands.

Species 103. (Mus. Sowerby.)

CYLINDRELLA BULIFORMIS. *Cyl. testā breviter fusiformi, rosā, tenuissimē striatā, ventricosā; anfractibus apicalibus contractis, medianis convexis, inflatis, ultimo angustato, rimato, vix soluto; aperturā magnā subrotundā; margine rotundo.*

THE BULB-SHAPED CYLINDRELLA. Shell shortly fusiform, pink, very finely striated, ventricose; apical whorls contracted, middle convex, inflated, last narrow, notched, hardly unwound; aperture large, rather round; margin round.

SOWERBY.

Hab. — ?



105.



104.



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113.

CYLINDRELLA.

PLATE XII.

Species 104. (Mus. Sowerby.)

CYLINDRELLA COSTULATA. *Cyl. testā brevi, pyramidalē, valdē distanter costatā, albā; anfractibus novenis, aequaliter crescentibus, convexis; ultimo longissimē soluto et producto; aperturā distantī, subquadrilaterā.*

THE SMALL-RIBBED CYLINDRELLA. Shell short, pyramidal, strongly distantly ribbed, whitish; whorls 9, equally increasing, convex; aperture distant, subquadrilateral.

ADAMS. Sh. of Jamaica. Pfeiffer. Mon. Vol. VI. p. 381.
Hab. Cuba.

Species 105. (Mus. Sowerby.)

CYLINDRELLA Plicata. *Cyl. testā brevi, albā, pyramidalē-fusiformi, tenuiter cretē costulatā; anfractibus superioribus valdē attenuatis, medianis et inferioribus ventricosiss, ultimo subangustato, soluto; aperturā distantī, rotundā.*

THE FLATTED CYLINDRELLA. Shell short, whitish, pyramidal-fusiform, finely closely ribbed; upper whorls much attenuated, middle and lower ventricose, last rather narrow, unwound; aperture distant, rounded.

PORE. Pfeiffer. Mon. Vol. VI. p. 389.
Hab. Cuba.

Species 106. (Mus. Sowerby.)

CYLINDRELLA ARTEMESIAE. *Cyl. testā roseo-fulcā, subfusiformi, solidiusculā, obliquē striatā; anfractibus permanentibus decenis, subrectilateralibus, ultimo subcontracto, breviter soluto; aperturā subapproxi-
mātā, rotundā, margine rotundā.*

THE ARTEMESIAN CYLINDRELLA. Shell pinkly-fulvous, rather fusiform, rather solid, obliquely striated; permanent whorls ten, nearly straight-sided, last a little contracted, with a short unwinding; aperture rather near, round, margin round.

GÜNDLACH. Pfeiffer. Mon. Vol. VI. p. 380.
Hab. Artemesia, Cuba.

Species 107. (Mus. Sowerby.)

CYLINDRELLA FILICOSIATA. *Cyl. testā fusiformi, purpureo-fusā, ventricosā, costis filiformibus frequentibus albis ornatā; anfractibus permanentibus 19, superioribus angustatis, medianis subingulatis, ultimo rimato, levato; aperturā pyriformi, superiōre acuminatā.*

THE THREAD-RIBBED CYLINDRELLA. Shell fusiform, purple-brown, ventricose, ornamented with numerous filiform ribs; permanent whorls 19, upper narrow, middle rather inflated, last notched, unwound; aperture pyriform, acuminate above.

SHUTTLEWORTH. Pfeiffer. Mon. Vol. VI. p. 378.
Hab. Mexico.

Species 108. (Mus. Sowerby.)

CYLINDRELLA CORONADOL. *Cyl. testā sinistrali, subcylindricā, albā, solidiusculā, costulis tenuibus, subremotis sculptā; anfractibus permanentibus decenis, superioribus angustatis, ultimo rimato; aperturā approximātā, rotundā, margine rotundā.*

THE CORONADO CYLINDRELLA. Shell sinistral, subcylindrical, whitish, rather solid, sculptured with thin rather remote ribs; permanent whorls ten, superior narrow, last notched; aperture approximate, rounded, margin round.

ARAGO. Pfeiffer. Mon. Vol. VI. p. 379.
Hab. Near Havana, Cuba.

Species 109. (Mus. Sowerby.)

CYLINDRELLA COSTATA. *Cyl. testā brevi, stramineā, subcylindricā, sursum subattenuatā; anfractibus permanentibus novenis, subrectē striatis, subrectilateralibus, ultimo longē rimato; aperturā subobliquē productā.*

THE RIBBED CYLINDRELLA. Shell short, straw, subcylindrical, attenuated upwards; permanent whorls nine, with rather straight striae, nearly straight-sided, last with a long notch; aperture rather obliquely produced.

GUILDING. Pfeiffer. Mon. Vol. VI. 381.
Hab. —?

Species 110. (Mus. Brit.)

CYLINDRELLA HYALISA. *Cyl. testâ pupiformi, ventricosâ, albâ, semipellucidâ; anfractibus permanentibus decenis, subobliquè costatis, tribus superioribus sensim contractis, alteris subequalibus, ultimo contracto, longè rimato, breviter soluto; aperturâ magnâ, superne subacuminatâ.*

THE HYALINE CYLINDRELLA. Shell pupa-shaped, ventricose, whitish, semipellucid; permanent whorls ten, rather obliquely ribbed, three upper sensibly contracted, the others nearly equal, last contracted with a long notch, shortly unwound; aperture large, ovate, subacuminated above.

PFEIFFER. Mon. Hel. Vol. VI. p. 359.

Hab. Mexico.

Species 111. (Mus. Sowerby.)

CYLINDRELLA ROBERTSI. *Cyl. testâ brevi, cylindraceâ, fuscâ, striatâ; anfractibus permanentibus septenis, subequalibus, superioribus rîz angustatis, ultimo infus angulato, longè soluto; aperturâ distanti, subtrigona, superne lato, infus subacuminato.*

ROBERTS'S CYLINDRELLA. Shell short, cylindrical, brown, striated; permanent whorls seven, nearly equal, upper scarcely narrowed, last angular below, unwound for a long part; aperture distant, subtrigonal, broad above, rather acuminate below.

ADAMS. Pfeiffer. Mon. Vol. VI. p. 383.

Hab. Jamaica.

Species 112. (Mus. Sowerby.)

CYLINDRELLA ORNATA. *Cyl. testâ cylindricâ, griseâ, sparsim tenuiter costatâ, costis ad suturam in tuberculas regularibus terminatis; anfractibus permanentibus decenis, superioribus tribus contractis, alteris subequalibus, ultimo alto, rimato, breviter soluto; aperturâ subdistanter obliquè productâ.*

THE ADORNED CYLINDRELLA. Shell cylindrical, grey, sparsely thin-ribbed, ribs terminating at the suture in regular tubercles; permanent whorls ten, upper three contracted, others nearly equal, last high, notched, shortly uncoiled; aperture rather distantly obliquely produced.

GUNDELOCH. Pfeiffer. Mon. Vol. VI. p. 382.

Hab. Yateras, Cuba.

Species 113. (Mus. Sowerby.)

CYLINDRELLA CONCRETA. *Cyl. testâ brevi, subfusiformi, laevi, albâ, semipellucidâ, molio ventricosâ, infus paulo contractâ; anfractibus decenis, ultimo subangustato, rimato; aperturâ approximâtâ, sub-
rectangulâ.*

THE CONCRETE CYLINDRELLA. Shell short, subfusiform, smooth, whitish, semipellucid, ventricose in the middle, a little contracted below; whorls 10, last rather narrow, notched; aperture near, rather rounded.

GUNDELOCH. Pfeiffer. Mon. Vol. VI. p. 363.

Hab. Cuba.



115 a



114



115 b



116



117



119



118

CYLINDRELLA.

PLATE XIII.

Species 114. (Mus. Brit.)

CYLINDRELLA PETIVERIANA. *Cyl. testis breviusculis, solidis, cylindricis, albidis; anfractibus permanentibus septenis, lentissimè crescentibus, undulatis costatis; inter costas angulationem et undulationem irregulariter sculptis; ultimo subangustato, rimato, aperturam obliquè subovato, margine duplicato.*

PETIVER'S CYLINDRELLA. Shell rather short, solid, cylindrical, whitish; permanent whorls seven, very slowly increased, with wavy ribs, angularly and wavy sculptured between the ribs; last rather angular, notched; aperture obliquely subovate, margin double.

FERRUSSAC. Pfeiffer. Mon. Vol. VI. p. 391.

Hab. Antilles.

Species 115. (Fig. a, b, Mus. Brit.)

CYLINDRELLA CLAVA. *Cyl. testis succineo-fusca seu albidis, tenui, altissimè, graciliformi, supra medium gradatim attenuatè; anfractibus depressis, tenuissimè striatis, permanentibus viginti, deciduis decenis, ultimo infra angulato, longè rimato, soluto; aperturam subdistanti, obliquè ovato, superne subacuminatè.*

THE KEY CYLINDRELLA. Shell amber brown or whitish, thin, much raised, slender, gradually attenuated above the middle; whorls depressed, very finely striated, twenty permanent, ten deciduous, last angular below, with a long notch; aperture rather distant, obliquely ovate, slightly acuminated above.

PEIFFER. Mon. Vol. VI. p. 365.

Hab. Chiappa, Mexico.

Species 116. (Mus. Brit.)

CYLINDRELLA LEHMANNI. *Cyl. testis solidis, ventricosissimè, terigatis, glarulo-coffis, prope suturas densiori; anfractibus permanentibus octonis, conraris, medio latissimis; supra infraque gradatim angustioribus, ultimo rimato ad aperturam, paulo soluto; aperturam obliquè pyriformi, superne subacuminatè.*

LEHMANN'S CYLINDRELLA. Shell solid, very ventricose, smooth, yellowish-coffee, more dense at the sutures; permanent whorls eight, convex, very wide in the middle, gradually narrower above and below; last notched at the aperture, a little unwound; aperture obliquely pyriform, slightly acuminated above.

PEIFFER. Mon. II. p. 370.

Hab. Mexico.

Species 117. (Mus. Brit.)

CYLINDRELLA TOWERI. *Cyl. testis altis, ventricosus, superne attenuatè, coffis, tenuiter striatè; anfractibus circa triginti, inferioribus duodecim subequalibus, rectilatis, calidis, latis; ultimo tenacato, rimato; aperturam approximati, subobliqui, latè, columellè latè, infra emulcatulati.*

THE TOWER CYLINDRELLA. Shell high, ventricose, attenuated above, coffee-coloured, finely striated; whorls about thirty, lower twelve rather equal, straight-sided, broad; last truncated, notched; aperture near, rather oblique, broad, columella broad, with a channel below.

PEIFFER. Mon. IV. p. 636.

Hab. Chiappa, Mexico.

Species 118. (Mus. Brit.)

CYLINDRELLA BOUCAUD. *Cyl. testis altis, cylindricis, subequaliter ventricosis, stramineis; anfractibus permanentibus novenis, altis, rectilatis, ultimo infra contracto, rimato, supra marginem aperturæ arcuati; aperturam obliquè subpyriformi, superne subacuminatè.*

BOUCAUD'S CYLINDRELLA. Shell high, cylindrical, rather equally ventricose, straw; permanent whorls nine, high, rectilateral, last contracted below, notched, arched above the margin of the aperture; aperture obliquely subpyriform, slightly acuminated above.

SALLÉ. Proc. Zool. Soc. 1853, T. XXXIII. f. 1.

Hab. Cordova and Orizaba, Mexico.

CYLINDRELLA.—PLATE XIII.

Species 119. (Mus. Brit).

CYLINDRELLA RECTICOSTA. *Cyl. testâ albidâ, costis solidis, rectis, distantibus sculptâ, medio infraque cylindricâ, supernè sensim contractâ; anfractibus permanentibus tredecim, septenis inferioribus subæqualibus, vix convexis; suturâ profundâ, ultimo rinato; aperturâ approximâtâ, latâ, margine crasso.*

THE STRAIGHT-RIBBED CYLINDRELLA. Shell whitish, sculptured with solid, straight, distant ribs, cylindrical in the middle and below, sensibly contracted above; permanent whorls thirteen, seven lower nearly equal, hardly convex; suture deep, last notched; aperture approximate, broad, margin thick.

PFEIFFER. Mon. II. p. 369.

Hab. Oajaca, Mexico.



121a



120



121b



123



122a



124



122b



125



126



127

CYLINDRELLA.

PLATE XIV.

Species 120. (Mus. Sowb.)

CYLINDRELLA DOMINICENSIS. *Cyl. testâ brevi, fulvâ, subfusiformi; anfractibus novem, subconvexis, ultimo longè soluto; aperturâ distant, parvâ, obliquè subovatâ, margine rotundâ.*

THE DOMINICAN CYLINDRELLA. Shell short, fulvous, subfusiform; whorls nine, rather convex, last with long part unwound; aperture distant, small, obliquely subovate, margin rounded.

PFEIFFER. Mon. III. p. 574.

Hab. Haiti, Peru.

Species 121. (Fig. a, b, Mus. Brit.)

CYLINDRELLA VOLUBILIS. *Cyl. testâ altâ, fulvâ, semipellucidâ, angustè cylindricâ, levigatâ, nitentâ; anfractibus octodecim, inferioribus decem subæqualibus, rectilateralibus; ultimo soluto, obliquè ad aperturam declivi; aperturâ obliquè ovatâ.*

THE VOLUBLE CYLINDRELLA. Shell high, fulvous, semipellucid, narrowly cylindrical, smooth, shining; whorls eighteen, lower ten nearly equal, straight-sided; last unwound, sloped down obliquely towards the aperture; aperture obliquely ovate.

MORELET. Pfeiffer. Mon. III. p. 576.

Cylindrella sacora. Poey.

Hab. Cuba.

Species 122. (Fig. a, b, Mus. Brit.)

CYLINDRELLA SCEVA. *Cyl. testâ sinistrali, pupæformi, tenuissimè striatâ, rufâ; anfractibus permanentibus decem, convexiusculis, superioribus contractis, medianis inflatis, inferioribus subangustatis; aperturâ subdistanti, latâ.*

THE LEFT-HANDED CYLINDRELLA. Shell sinistral, pupa-shaped, very finely striated, coffee-coloured; permanent whorls ten, rather convex, upper contracted, middle inflated, lower rather narrowed; aperture a little distant, broad.

GRINDLACH. Pfeiffer. Malak. Bl. 1863.

Hab. Near Matanzas, Cuba.

Species 123. (Mus. Brit.)

CYLINDRELLA ARCTISPIRA. *Cyl. testâ altâ, solidâ, albâ, cylindricâ, medio subinflato; anfractibus permanentibus quindecim, compressis, calè convexis, costis calidis, arcuatis, crebris, sculptis; ultimo rimato; aperturâ magnâ, rotundâ, margine crasso.*

THE BOW-SPIRED CYLINDRELLA. Shell raised, solid, white, cylindrical, middle rather inflated; permanent whorls fifteen, compressed, very convex, sculptured with strong, arched, numerous ribs; last notched; aperture large, rounded, margin thick.

PETIT. Proc. Zool. Soc. 1860, p. 139.

Hab. Juquila, Mexico.

Species 124. (Mus. Brit.)

CYLINDRELLA TOMACELLA. *Cyl. testâ altâ, subcylindricâ, tenuissimè striatâ, succineo-rubescens; anfractibus permanentibus duodecim, octonis inferioribus subæqualibus, rectilateralibus; ultimo subcontracto; rimato, soluto; aperturâ obliquè subpyriformi, distanti, superius subacuminatâ.*

THE LONG-NECKED CYLINDRELLA. Shell high, subcylindrical, very finely striated, reddish amber; permanent whorls twelve, eight lower nearly equal, rectilateral, last a little contracted; notched, nicoiled; aperture obliquely subpyriform, distant, acuminated above.

MORELET. Pfeiffer. Mon. III. p. 568.

Cylindrella Moreleti. Deshayes.

Hab. Guatemala.

Species 125. (Mus. Brit.)

CYLINDRELLA SUTILIS. *Cyl. testâ gracili, altâ, subfusiformi, griseo-fusâ, levigatâ, supernè longè contractâ, infra medium subcentricâ; anfractibus rigatis, inferioribus quinque sculis, superioribus quindecim angustissimis, ultimo infusè attenuato, soluto; aperturâ majusculâ, ovatâ, distantî, aurigine rufesce.*

CYLINDRELLA.—PLATE XIV.

THE SUTLE CYLINDRELLA. Shell slender, high, rather fusiform, grey-brown, smooth, with a long part contracted above, rather ventricose below the middle; whorls twenty, lower five full, upper fifteen extremely narrow, last attenuated below, unwound; aperture rather large, oval, distant, margin reflected.

MORELET. Pfeiffer. Mon. III. p. 577.

Hab. Guatemala.

Species 126. (Mus. Brit.)

CYLINDRELLA CINEREA. *Cyl. testā fusiformi, altā, griseā, obliquē costatā, ultimo anfractu medio torto, contracto, elongato, longē soluto; aperturā rotundā, distantī, declivi.*

THE CINEREOUS CYLINDRELLA. Shell fusiform, high, grey, obliquely ribbed, last whorl tortuous in

the middle, contracted, lengthened, much unwound; aperture rounded, distant, sloped.

PFEIFFER. Mon. III. p. 578.

Hab. Cuba.

Species 127. (Mus. Brit.)

CYLINDRELLA ZEBRINA. *Cyl. testā solidiusculā, subventricosā, subpyramidatā, fulvā, fasciis perpendicularibus fuscis pictā; anfractibus permanentibus novenis, lacerigatis, concavis; aperturā ovatā, margine crasso.*

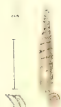
THE ZEBRA CYLINDRELLA. Shell rather solid, rather ventricose, subpyramidal, fulvous, painted with perpendicular brown bands; permanent whorls nine, smooth, convex; aperture ovate, margin thick.

PFEIFFER. Mon. III. p. 584.

Hab. Jamaica.



129



130



134 b



128



131



132 a



134 d



130



133



134 c

CYLINDRELLA.

PLATE XV.

Species 128. (Mus. Brit.)

CYLINDRELLA SEXDECIMALIS. *Cyl. testâ gracillimâ, fusiformi, fulvâ, tenui, semipellucidâ, levigatâ; anfractibus sexdecenis, convexis; apicali globoso, sequentibus senis attenuatis, medianis inflatis, ultimo longissimè obliquè soluto, striato; aperturâ distantî, rotundâ, margine crasso.*

THE SIXTEEN-WHOOLED CYLINDRELLA. Shell very narrow, fusiform, fulvous, thin, semipellucid, smooth; whorls sixteen, convex; apical subglobose, six following attenuated, middle inflated, last with a long piece uncoiled, striated; aperture distant, rounded, margin thick.

JIMENO. MS. Plur. Mon. Vol. VI. p. 384.

Hab. Bermeja vieja, Cuba.

The variegation spoken of in the original description is not perceptible in the British Museum specimens.

Species 129. (Mus. Brit.)

CYLINDRELLA APISTOMA. *Cyl. testâ gracillimâ, subcylindricâ, fulvâ; anfractibus octodecenis, supra medianâ attenuatis, infrâ subangulatis, ultimo distorto, striato, soluto; aperturâ subdistanti, subtrigonâ, superiôrè latâ, infrâ subcontractâ.*

THE DESCENDING-MOOTHED CYLINDRELLA. Shell very slender, subcylindrical, fulvous; whorls eighteen, attenuated above the middle, nearly equal, last distorted, striated, uncoiled; aperture rather distant, subtrigonal, broad above, rather contracted below.

PFEIFFER. Mon. IV. p. 703.

Hab. Cordova, Mexico.

Species 130. (Mus. Brit.)

CYLINDRELLA GRACILLIMA. *Cyl. testâ gracillimâ, fulvâ, prope apicem contractâ, supra medianâ subinflatâ, mediâ et infrâ subcontractâ; ultimo anfractâ elongato, infrâ attenuato, perobliquè soluto; aperturâ latâ, margine subexpanso.*

THE VERY SLENDER CYLINDRELLA. Shell very thin, fulvous, contracted near the apex, somewhat inflated above the middle, rather contracted at

and below the middle; last whorl elongated, attenuated below, very obliquely uncoiled; aperture broad, margin a little expanded.

POEY. Pfeiffer, Mon. III. p. 576.

Hab. Cuba.

The swelled portion of this narrow shell is above the middle of the lengthened spire.

Species 131. (Mus. Brit.)

CYLINDRELLA VARIEGATA. *Cyl. testâ breviusculâ, latiusculâ, cylindricâ, tenuiter lineatâ, fulvâ et subrosâ, obliquè fasciis fuscis variegatâ; anfractibus permaacentibus novenis, moderatè convexis, supra medianâ gradatim attenuatis, ultimo rinato, breviter soluto; aperturâ subdistanti, ovatâ, obliquâ, margine subrotundo.*

THE VARIEGATED CYLINDRELLA. Shell rather short, rather broad, cylindrical, finely ridged, fulvous and pinky, variegated with oblique brown bands; permanent whorls nine, moderately convex, gradually attenuated above the middle, last notched, shortly uncoiled; aperture rather distant, ovate, oblique, margin rather rounded.

PFEIFFER. Mon. II. p. 374.

Hab. Cuba, Florida.

Species 132. (Mus. Brit.)

CYLINDRELLA PHILIPPANA. *Cyl. testâ gracili, fusiformi, fulvâ, regulariter, subdistanter, tenuiter costatâ; anfractibus octodecenis, apicalibus inflatis, globosis, sequentibus septenis angustis, medianis subinflatis, ultimo subcontracto, longè soluto; aperturâ obliquè ovatâ, margine crasso.*

PHILIPP'S CYLINDRELLA. Shell slender, fusiform, fulvous, regularly, rather distantly, finely ribbed; whorls eighteen, apical inflated, globose, seven following narrow, middle rather inflated, last rather narrowed, with long unwinding; aperture obliquely ovate, margin thick.

PFEIFFER. Mon. II. p. 378.

Cylindrella aculeus. Morelet.

Hab. Cuba.

CYLINDRELLA.—PLATE XV.

Species 133. (Mus. Brit.)

CYLINDRELLA CUMINGIANA. *Cyl. testā brevī, pupaformi, berrigatā, versus apicem inflatā, infra attenuatā; anfractibus octonīs, ultimo contracto, rimato, longē soluto; aperturā auriformi, supernè subacuminato.*

CUMING'S CYLINDRELLA. Shell short, pupa-shaped, smooth, inflated towards the apex, attenuated below; whorls eight, last contracted, notched, with lengthened portion unwound; aperture ear-shaped, rather acuminate.

PREIFFER. *Mon.* II. p. 385.

Hab. Philippine Islands.

Species 134. (Fig. a, b, c, d, Mus. Brit.)

CYLINDRELLA MAUGERI. *Cyl. testā pyramidatā, lavi-*

gatā, albā, vel flavidā, ad aperturam rosā, vel fusco-nigrescenti, ad suturam albo fasciatā, mediò paulò inflatā; anfractibus circā decenis, ultimo contracto; aperturā subovatā, margine reflexo, interrupto, columellā flexuosā.

MAUGER'S CYLINDRELLA. Shell pyramidal, smooth, white or yellowish-pink at the aperture, or blackish-brown, with white banded suture, a little inflated in the middle; whorls about ten, last contracted; aperture subovate, margin reflected, interrupted, columella flexuous.

WOOD (Helix). *Index Testaceologicus.*

Pupa splendens. Menke.

Helix ignifera. Ferrussac.

Pupa fusiformis. Adams.

Hab. Jamaica.



136



135



137



138



139



140



a



b

141



142



143



144

CYLINDRELLA.

PLATE XVI.

Species 135. (Mus. Brit.)

CYLINDRELLA LUCENS. *Cyl. testā subpyramidalā, angustā; albida, semipellucidā, anfractibus duodecimis, gradatim crescentibus, convexis, ultimo angustiusculo, paulo soluto; aperturā subrotundā, supernē depressā, cuneatā.*

THE LUCID CYLINDRELLA. Shell subpyramidal, narrow, whitish, semipellucid, whorls twelve, gradually increased, convex, last rather narrow, a little unwound; aperture rather round, depressed above, cuneate.

WEIGHT. MS. Brit. Mus.

Hab. Cuba.

Species 136. (Mus. Brit.)

CYLINDRELLA MORINI. *Cyl. testā fusca, pyramidalosubfusiformi; anfractibus quindecim, brevibus, peroblique latis, superioribus attenuatis, inferioribus paulo magis ventricosis, ultimo longē soluto, subrotund; aperturā distanti, transverse oblongā, utrinque subacuminatā.*

MORINI'S CYLINDRELLA. Shell brown, pyramido-fusiform; whorls fifteen, short, very obliquely ridged, upper attenuated, lower a little more ventricose; last with a long unwinding, a little twisted; aperture distant, transversely oblong, slightly acuminate on each side.

MORELET. Pfeiffer, Mon. Helic. VI. p. 388.

Hab. Verapaz, Guatemala.

Species 137. (Mus. Brit.)

CYLINDRELLA PLANOSPIRA. *Cyl. testā angustā, cylindricā, semipellucidā, pallidē succineo-corneā; anfractibus permanentibus, undecimis brevibus, convexiusculis; aperturā distanti, supernē infrāque unguatā.*

THE PLAINSPIRED CYLINDRELLA. Shell narrow, cylindrical, semipellucid, pale horny amber; permanent whorls eleven, rather short, a little convex; aperture distant, angular above and below.

PFEIFFER. Mon. Helic. p. 371.

Hab. Monte Cuzco, Cuba.

Species 138. (Mus. Brit.)

CYLINDRELLA MALLEATA. *Cyl. testā solidā, albida, fusca, distanter strigatā, irregulariter rugis punctulatis angulatis saginatā, ventricosa, medio inflatā; anfractibus octonis, latis, breviusculis; ultimo infrā subangustato, carinato; aperturā irregulariter subquadrata, margine crasso, rotunda, inequali.*

THE HAMMERED CYLINDRELLA. Shell solid, whitish, distantly striped with brown, irregularly shagreened with punctured angular wrinkles, ventricose, inflated in the middle; whorls eight, broad, rather short, last a little narrowed and keeled below; aperture irregularly subquadrate, margin thick, round, unequal.

PFEIFFER. Mon. Helic. VI. p. 363.

Hab. St. Domingo.

Species 139. (Mus. Brit.)

CYLINDRELLA CAMOENSIS. *Cyl. testā fusiformi, attenuatā, altissimā, fumoso-castanea, anfractibus viginti, brevibus, medio subinflatis, laminis crebris ad suturam supra infrāque prominentibus, medio obsolete, sculptis; ultimo angustato, soluto; aperturā rotundā.*

CAMOENS' CYLINDRELLA. Shell fusiform, attenuated, much elevated, smoky chestnut, whorls twenty, short, a little inflated in the middle, sculptured with numerous laminae, prominent above and below, and obsolete in the middle; last narrow, unwound; aperture rounded.

PFEIFFER. Mon. Helic. VI. p. 388.

Hab. Cuba.

The fine laminated ridges form rounded scales at the top and bottom of each whorl, and are almost lost in the middle.

Species 140. (Mus. Brit.)

CYLINDRELLA BEARDSLEYANA. *Cyl. testā pallidē fusca, tenuiter liratā, subpyramidalā; anfractibus novenis, subconvexis, gradatim crescentibus, liris frequentibus, curvis, interstitiis latoribus.*

CYLINDRELLA.—PLATE XVI.

BEARDSLEY'S CYLINDRELLA. Shell pale brown, finely ridged, somewhat pyramidal; whorls nine, rather convex, gradually increased, ridges numerous, curved, interstices wider.

C. B. ADAMS. — ?

Hab. Jamaica.

Species 141. (Mus. Brit.)

CYLINDRELLA TURKASIANA. *Cyl. testâ fusiformi, angustâ, semipellucidâ, lavi, pallidâ succineâ; anfractibus septemdecenis, superioribus inferioribusque attenuatis, medianis subangulatis, ultimo longissimè soluto, declivi, rugato, tortuoso; apertura parvâ, distantissimâ.*

THE TURKASIAN CYLINDRELLA. Shell fusiform, narrow, semipellucid, smooth, pale amber; whorls seventeen, upper and lower attenuated, middle a little inflated, last with a long piece unwound, sloped downward, wrinkled, twisted; aperture small, very distant.

GÜNDLACH. Pfeiffer. Mon. Helic. VI. p. 385.

Lescaletti. Gündlach ?

Hab. Monte Toro, Cuba.

Species 142. (Mus. Brit.)

CYLINDRELLA REGELIANA. *Cyl. testâ parvâ, angustè pyramidatâ, opacâ, fulvâ, distanter strigatâ; anfractibus quaterdecenis, tenuiter acutè liris, brevissimis ultimo longè soluto, tortuoso; apertura parvâ, distantî; apice attenuato, acuminato.*

REGEL'S CYLINDRELLA. Shell small, narrowly pyramidal, opaque, fulvous, distantly striped; whorls fourteen, finely, acutely ridged, very short, last with long portion unwound, twisted; aperture small, distant; apex attenuated, acuminated.

SHUTTLEWORTH. Pfeiffer. Mon. Hel. VI. p. 368.
Hab. Cuba.

Species 143. (Mus. Brit.)

CYLINDRELLA PUPEFORMIS. *Cyl. testâ brevi, lavi, cylindricâ, semipellucidâ, albâ, vel castaneâ; anfractibus permanentibus senis, brevibus, convexis; ultimo breviter soluto, apertura subdistantî, magnâ, margine crasso, subrotundo.*

THE PUPA-SHAPED CYLINDRELLA. Shell short, smooth, cylindrical, semipellucid, white or chestnut; permanent whorls six, short, convex; last with short unwinding; aperture rather distant, large, margin thick, rather rounded.

C. B. ADAMS. Pfeiffer. Mon. Helic. VI. p. 370.

Hab. Jamaica.

Species 144. (Mus. Brit.)

CYLINDRELLA UNCATA. *Cyl. testâ cylindricâ, solidiusculâ, latiusculâ, pallidè cornèâ, medio paulo inflata; anfractibus undecenis, brevibus, subtiliter liris; ultimo subangustato, soluto, versus aperturam coarctato; liris anfractuum ad suturam supra infrique quasi uncinatis, apertura distantî, subtriangulâ.*

THE HOOKED CYLINDRELLA. Shell cylindrical, very solid, rather broad, pale horn; a little inflated in the middle; whorls eleven, short, rather distantly ridged, last rather narrow, unwound, contracted towards the aperture; ridges of the whorls, as it were, hooked at the suture above and below; aperture distant, subtriangular.

GÜNDLACH. Pfeiffer. Mon. Helic. VI. p. 382.

Hab. Yateras, Cuba.

The tubercles formed at the sutures on the ridges have the appearance of little hooks.

CYLINDRELLA.

<i>aculeus</i> , Morelet.	XV.	132	<i>Cumingiana</i> , Pfeiffer	XV.	133
<i>acutus</i> , Pfeiffer.	VII.	62	<i>cylindrus</i> , Chemnitz	II.	9
<i>Adamsiana</i> , Pfeiffer...	II.	16	<i>cylindrus</i> , See <i>alta</i>	VIII.	68
<i>Agnesiata</i> , Adams	V.	43	<i>denticulata</i> , Pfeiffer	III.	22
<i>alabastrina</i> , Pfeiffer	IX.	81	<i>Dominicensis</i> , Pfeiffer	XIV.	129
<i>albo-crenata</i> , Pfeiffer	IV.	27	<i>Dunkeriana</i> , Pfeiffer	VIII.	5
<i>alta</i> , Sowerby (cylindrus by error) ..	VIII.	58	<i>elegans</i> , Pfeiffer	IV.	3
<i>amethystina</i> , Chittly	II.	15	<i>Ellioti</i> , Poey	VI.	37
<i>angusta</i> , Adams	VII.	63	<i>elongata</i> , Chemnitz	IV.	3
<i>Augustae</i> , Wright	XI.	97	<i>eximia</i> , Pfeiffer	I.	6
<i>Augustae</i> , Wright	XI.	35	<i>Fabriciana</i> , Poey	VIII.	79
<i>apiostoma</i> , Pfeiffer	XV.	129	<i>fastigiata</i> , Gundlach	IV.	34
<i>arctispira</i> , Pfeiffer	XIV.	123	<i>fibrosa</i>		
<i>arcuata</i> , Martens	VI.	49	<i>filicostata</i> , Shuttleworth	XII.	197
<i>aristipica</i> , Pfeiffer	I.	5	<i>flammulata</i> , Pfeiffer	II.	8
<i>artemisia</i> , Gundlach	XII.	166	<i>fusiformis</i> , Adams	XV.	131
<i>asperata</i> , Sowerby (aspera by error).	XI.	28	<i>Garciana</i> , Wright	VIII.	66
<i>aspera</i> , Adams	I.	1	<i>Gheisbrihti</i> , Pfeiffer	I.	7
<i>Auberiana</i> , Orbigny	IV.	36	<i>goniostoma</i>	VIII.	72
<i>Beardsleyana</i> , Adams	XVI.	149	<i>Gossei</i> , Pfeiffer	IV.	35
<i>Blaneyana</i> , Pfeiffer	VI.	53	<i>gracilis</i> , Wood	IX.	78
<i>Boucardi</i> , Sallé	XIII.	118	<i>gracillima</i> , Poey	XV.	139
<i>Brookesiana</i> , Gundlach	VI.	52	<i>grandis</i> , Pfeiffer	I.	1
<i>brunneescens</i> , Gundlach	X.	92	<i>Gravesii</i> , Adams	III.	18
<i>bulbiformis</i> , Sowerby	XI.	103	<i>Hanleyana</i> , Pfeiffer	V.	37
<i>carinata</i> , Pfeiffer	VIII.	67	<i>Hillieri</i> , Pfeiffer	XI.	96
<i>camoensis</i> , Pfeiffer	XVI.	139	<i>Hollandi</i> , Pfeiffer	IX.	76
<i>cerulans</i> , Poey	III.	21	<i>Humboldtiana</i> , Pfeiffer	III.	25
<i>Chemnitziana</i> , Ferrussac	IV.	33	<i>hyalina</i> , Pfeiffer	XII.	149
<i>chordata</i> , Pfeiffer	V.	38	<i>ignifera</i> , Ferrussac	XV.	134
<i>cinerea</i> , Pfeiffer	XIV.	126	<i>illamellata</i> , Wright	X.	87
<i>clara</i> , Wright	IX.	82	<i>inornata</i> , Adams	XI.	99
<i>clava</i> , Pfeiffer	XIII.	115	<i>integra</i> , Pfeiffer	X.	93
<i>colaris</i> , Ferrussac	XI.	95	<i>intermedia</i> , Sowerby	X.	91
<i>columnella</i>	III.	25	<i>interrupta</i> , Gundlach	VIII.	71
<i>concreta</i> , Gundlach	XII.	113	<i>intusmalleata</i> , Gundlach	VII.	64
<i>cornua</i> , Adams	II.	12	<i>irrorata</i> , Gundlach	IV.	32
<i>Coronadoi</i> , Arango	XII.	108	<i>lata</i> , Adams	VII.	58
<i>costata</i> , Guilding	XII.	169	<i>Lateradii</i> , Grateloup	X.	89
<i>costatus</i> , Gray	IV.	39	<i>Lavalliana</i> , Orbigny	VII.	54
<i>costulata</i> , Adams	XII.	164	<i>Leibmani</i> , Pfeiffer	XIII.	146
<i>costulosa</i> , Adams	IV.	39	<i>Lescallei</i>	XVI.	141
<i>crispula</i> , Pfeiffer	V.	39	<i>litans</i> , Gould	IV.	36
<i>Cumingii</i> , Adams	IV.	33	<i>lucens</i> , Wright	XVI.	135

CYLINDRELLA.

	Plate.	Species.		Plate.	Species.
macrostoma, Pfeiffer	III.	26	Rüsei, Pfeiffer	XI.	94
malleata, Pfeiffer	XVI.	138	Salleana, Pfeiffer	V.	40
mangerii, Wood	XV.	134	sanguinea, Chemnitz	II.	12
megacheila, Chittly	VI.	54	Sauvalliana, Gündlach	VI.	50
Mexicana, Pfeiffer	VII.	61	saxosa, Poey	XIV.	121
microstoma, Pfeiffer	V.	42	scabra, Gündlach	XIV.	122
montana, Adams	V.	44	scalarina, Shuttleworth	IX.	74
Moreleti, Pfeiffer	VII.	59	seminuda, Adams	V.	46
Morini, Morelet	XVI.	136	sexdecimalis, Jimeno	XV.	128
multispiralis, Sowerby	IX.	79	Shuttleworthiana, Poey	III.	23
nobilior, Adams	VI.	53	soluta, Pfeiffer	IX.	75
nobilis, Heutz	IV.	36	Sowerbiana, Pfeiffer	III.	20
notata, Gündlach	XI.	102	speciosa, Dunker	I.	2
obesa, Martins	VIII.	73	splendens, Menke	XV.	134
obliqua, Pfeiffer	IV.	28	splendida, Pfeiffer	I.	3
obtorta, Menke	IV.	36	striatella, Wright	VII.	55
ornata, Gündlach	XII.	112	subtilis, Morelet	XIV.	125
oviedoiana, D'Orbigny	II.	13	suturalis, Weindland	III.	19
pallida, Guilding	IV.	30	teneila, Adams	XI.	101
perlata, Pfeiffer	X.	88	teres, Menke	V.	45
perplicata, Ferrussac	IV.	29	tomacella, Morelet	XIV.	124
Petiveriana, Ferrussac	XIII.	114	Teneriensis, Wright	X.	84
Philippiana, Pfeiffer	XV.	132	transperta, Sowerby	IX.	77
Piloceri, Pfeiffer	VI.	48	Trinitaria, Pfeiffer	V.	41
planospira, Pfeiffer	XVI.	137	trochaeformis, Sowerby	IX.	80
phacelata	II.	8	troucutati	XI.	35
plicata, Poey	XII.	105	tumidiora, Sowerby	VIII.	65
polygyra, Pfeiffer	VII.	57	tuffis, Pfeiffer	XIII.	117
porrecta, Gould	XI.	100	Turkassiana, Gündlach	XVI.	141
procera, Adams	II.	14	uncata, Gündlach	XVI.	144
producta, Gündlach	X.	89	variegata, Pfeiffer	XV.	131
pruinosa, Morelet	IV.	31	Vigmalensis, Wright	IX.	83
puncturata, Pfeiffer	III.	24	violacea, Wright	VII.	60
purpureformis, Adams	XVI.	143	ventricosa, Gündlach	III.	17
purpurea, Gray	II.	9	volubilis, Morelet	XIV.	121
recticosta, Pfeiffer	XIII.	119	Walpolei, Sowerby	VI.	51
Robertsi, Adams	XII.	111	Wrightii, Pfeiffer	X.	85
rosea, Adams	II.	11	zabrina, Pfeiffer	XIV.	127
robusta, Adams	II.	9	zonata, Adams	II.	10
Rugeliana, Shuttleworth	XVI.	142			

MONOGRAPH

OF THE GENUS

P U P A .

Things that were not, at Thy command,
In perfect form before Thee stand ;
And all to their Creator raise
A wondrous harmony of praise



2 a



1



2 b



1 a



2 a



2 b



1



2 b



1



1

P U P A.

PLATE I.

Genus PUPA. *Disparand.*

Testa terrestris, cylindrica, rimata, plerumque dextalibus annuquibus aistralis plerumque chrysalidiformis multispinalis, apice obtusa. Apertura frequenter plicata et dentata, margine reflexo, continuo. Operculum nullum.

SHELL TERRESTRIAL. Cylindrical, creased, generally chrysalis-shaped, with many whorls and obtuse apex. Aperture frequently plaited and toothed, margin reflected, continuous. Operculum none.

In the following monograph, which cannot be made absolutely complete in this work, the genera GIBBES, ENNEA, and VERTIGO are included with the undisputed Pupa. The species are found on most European continents and islands, particularly the more southern parts, and are also abundant in the East and West Indies, South Sea Islands, and other localities too numerous to mention. They are only wanting or rare in the colder climates. The *rima* in this and other genera of pupa-shaped land shells is a crease formed by an abnormal doubling as it were of the last whorl, bringing the mouth by a somewhat sudden turn to the front.

Species 1. (Mus. Sowerby.)

PUPA BRYANTI. *Pap. testâ breviter cylindricâ, breviter rimatâ, albida, costarum-nunculatâ; anfractibus octonis, plicis solidis, substantiâ tibus, rectiusculis minutis; apertura ovatâ, margine rotundo, reflexo, columellâ buplicatâ.*

BRYANT'S PUPA. Shell shortly cylindrical, shortly creased, whitish, mottled with chestnut; whorls eight, strengthened with solid, rather distant, rather straight ribs; aperture ovate, margin rounded, reflected; columella with two plaits.

PEIFFER, Mon. Hel. VI. p. 92.
Hab. South Magna, Bahamas.

From its form and mottled colouring, this species would seem to resemble Pupa Chrysalis with its whorls vertically depressed, but with the addition of two plaits on the columella.

Species 2. (Fig. a, b, Mus. Brit.)

PUPA GLANS. *Pap. testâ obesa, chrysalidiformi, solidâ, subcreulatâ, annuquâ castaneo variegatâ, reversâ apicem acuminatâ; anfractibus decenis, costis validis minutis; apertura intus castanea, margine aureo, columellâ crassâ, validè buplicatâ.*

THE ACORN PUPA. Shell obese, chrysalis-shaped, solid, bluish, sometimes varied with chestnut, acuminate towards the apex; whorls ten, strengthened with strong ribs; aperture chestnut within, margin golden, columella thick, strongly buplicate.

KÜSTER, Pfeiffer, Mon. Hel.

Hab. New Providence, Bahamas.

Species 3. (Fig. a, b. Mus. Brit.)

PUPA MUMIA. *Pap. testâ oblongo-chrysalidiformi, subcreulatâ, annuquâ castaneo variegatâ, reversâ apicem acuminatâ, subdexter costatâ; apertura aureâ, margine crassissimo, columellâ validè buplicatâ, inter plicis profundè sinuatâ.*

THE MUMMY PUPA. Shell oblong-chrysalis-shaped, bluish, sometimes mottled with chestnut, acuminate towards the apex, rather lightly ribbed; aperture golden; margin very thick, columella with two strong plaits, deeply sinuated between the plaits.

BRUGGIENE, Enc. Met.

Pupa sculpta, Pory (var.)

Pupa mumioides? Pfeiffer.

Hab. Cuba.

Species 4. (Mus. Brit.)

PUPA PROTEUS. *Pap. testâ latissimâ, breviter cylindricâ, subtruncatâ, creulatâ, solidâ; anfractibus decenis, superioribus depressis, alteris costis crassis substantiâ tibus minutis; apertura latâ, intus aureâ, margine crasso, albido, supra columellam implicatâ.*

THE PROTEUS PUPA. Shell very wide, shortly cylindrical, somewhat truncated, bluish, solid; whorls ten, upper depressed, others strengthened with slightly distant strong ribs; aperture broad golden within, margin thick, whitish, with a plait above the columella.

GUNDLACH MS. Pfeif. VI. p. 291.

Pupa dimidiata, Pfeiffer (*olim*).

Hab. Cuba.

Species 5. (Mus. Brit.)

PUPA CHRYSALIS. *Pup. testâ elongato-chrysalidiformi, fulvâ castaneo-narmorâtâ; costis distantibus, rotulis; spirâ obtusâ; anfractibus undecenis, inferioribus altis, rectilateralibus; aperturæ marginē auriformi, albo, rotundo, columellâ edentulâ.*

THE CHRYSALIS PUPA. Shell elongated, chrysalis-shaped, fulvous, marbled with chestnut; ribs distant, strong; spire obtuse; whorls eleven, lower high, straight-sided; margin of aperture ear-shaped, white, rounded; columella without teeth.

BECK, *Pfeiffer*, Mon. II. p. 314.

Hab. Cuba.

Of a more straight and lengthened cylindrical form than Pupa Mumia and without plaits on the columella.

Species 6. (Mus. Brit.)

PUPA INCRASSATA. *Pup. testâ obesâ, cylindricâ, subtruncatâ, subcervicatâ; costis subobliquis, distantibus, levibus; aperturâ auriformi, flexuosâ; marginē albido, crassissimo; labio exteriori superne flexuoso, labio interno validè buplicato.*

THE THICKENED PUPA. Shell obese, cylindrical, slightly truncated, bluish; ribs rather oblique, distant, smooth; aperture auriform, flexuous; margin whitish, very thick; outer lip flexuous above, inner lip with two strong folds.

SOWFERY.

Hab. Cuba.

The writer having figured this shell under the name of *P. tumida*, and finding that name already used for another species, is obliged to re-name it. It resembles *P. proteus*, but its chief peculiarity is a much thickened and flexuous margin.

Species 7. (Mus. Brit.)

PUPA UVA. *Pup. testâ chrysalidiformi, caruleâ, crassicostatâ; anfractibus undecenis, rectilateralibus; aperturâ subovatâ, aurâ, marginē interno circ plicato.*

THE GRAPE PUPA. Shell chrysalis-shaped, bluish, thick-ribbed; whorls eleven, straight sided; aperture subovate, golden, inner margin scarcely plaited.

LINNEUS. Syst. Nat.

Hab. Guadaloupe.



P U P A.

PLATE II

Species 8. (Mus. Brit.)

PUPA MICROSTOMA. *Pup. testē brevi, acuminatā, tenuiter liratā, griseā, fusco nebulatā; apice attenuato, flavido; aperturā parvā, intus castaneā, margine crasso, rotundo, plicā superiori crasso, plicā columellari parvā.*

THE SMALL-MOUTHED PUPA. Shell short, acuminate, finely ridged, grey, clouded with brown; apex attenuated, yellowish; aperture small, chestnut within, margin thick, rounded; upper plait thick, columellar plait small.

PFEIFFER. Monographia Helicorum, vol. iv. p. 659.

Hab. Haiti.—Porto Rico.—Cuba.

Species 9. (Mus. Sowerby.)

PUPA ANTONI. *Pup. testē profundē rimatā, umbilicatā, brevi, obtusā, tenuiter liratā, griseo-rubescētē marmoratā; aperturā majusculā, intus castaneā, margine albo, subexpanso, plicis duabus parvis armato.*

ANTON'S PUPA. Shell deeply notched, umbilicated, short, obtuse, finely ridged, marbled with reddish-grey; aperture rather large, chestnut within, margin white, rather expanded, armed with two small plaits.

KÜSTER. Pfeiffer, Mon. III. p. 539.

Hab. Barbice.

Species 10. (Mus. Sowerby.)

PUPA MARMORATA. *Pup. testē brevi, levigatā, angustē rimatā fulvā, flammis undique albidis variegatā; apice pyramidalē; aperturā magnā, suprà columellam uniplicatā.*

THE MARBLED PUPA. Shell short, smooth, narrowly notched; fulvous, variegated with white flames and waves; apex pyramidal; aperture large, with a single plait above the columella.

PFEIFFER. Monograph. III. 523.

Hab. Cuba.—Bahamas.

Very beautifully ornamented with enamelled white markings over a pinky-fawn ground.

Species 11. (Mus. Sowerby.)

PUPA INFANDA. *Pup. testē cylindricā, profundē rimatā; umbilicatā, solidā, albā, latā; anfractibus superioribus firē levigatis, ultimis costis regularibus, subdistansibus, sculptis; aperturā magnā, intus fulvā, suprà columellam plicā dentiformi parvā munitā.*

THE UNDESCRIBED PUPA. Shell cylindrical, deeply notched, umbilicated, solid, white, broad; upper whorls almost smooth; the last sculptured with regular ribs; aperture large, fulvous within; provided with tooth-like plait above the columella.

SHUTTLEWORTH. Pfeiffer, Mon. VI. vol. vi. p. 288.

Pupa decumana, Poey.

Hab. Cuba.

This shell differs from *Pupa namia* in the first whorls being partially denuded of ribs.

Species 12. (Fig. a, b, Mus. Brit.)

PUPA ZEBRA. *Pup. brevissimā, rimatā, tenuiliratā, fulvescentē, strijs undulatis fuscis longitudinaliter ornatā; spirā versā apicem pyramidalē, aperturā parvā, lobio interno angustō, uniplicatō, columellā obliquē uniplicatā.*

THE ZEBRA PUPA. Shell very short, notched, finely ridged, rather fulvous, longitudinally ornamented with undulated brown stripes; spire pyramidal towards the apex, aperture small, inner lip

PUPA.—PLATE II.

narrow, with one plait, columella obliquely one-plaited.

WEINLAND. MS. Brit. Mus.

Hab. Bahamas.

Species 13. (Mus. Brit.)

PUPA MULTICOSTATA. *Pup. testâ oblongâ, albo-griseo-scenti, rimatâ, liris validis, crebris, longitudinaliter sculptâ; aperturâ subquadratâ, margine crasso, intus castaneo, columellâ latâ, obliquè uniplicatâ, labio interno suprà columellam uniplicato.*

THE MANY-RIBBED PUPA. Shell oblong, greyish-white, notched, sculptured longitudinally with strong close ridges; aperture rather square, margin thick, chestnut within, columella broad, obliquely single-plaited, inner lip with one plait above the columella.

KÜSTER. Pfeiffer, Mon. II. p. 323.

Hab. Cuba.

Species 14. (Mus. Brit.)

PUPA CRASSILABRIS. *Pup. testâ subcylindricâ, obtusâ, roseo-albidâ, fusco nebulatâ, tenuiter liratâ; aperturâ subauriformi, hiplicato, margine duplicato.*

THE THICK-LIPPED PUPA. Shell subcylindrical, obtuse, pinky-whitish, clouded with brown, finely ribbed; aperture somewhat auriform, two-plaited, margin doubled.

SHUTTLEWORTH — ?

Hab. India.

Species 15. (Mus. Brit.)

PUPA MARTENSI. *Pup. testâ cylindricâ, rimatâ, tenuissimè liratâ, albidd, fusco nebulatâ; apice obtuso; aperturâ magnâ, auriformi, biphicatâ, margine crasso.*

MARTEN'S PUPA. Shell cylindrical, notched, very finely ridged, whitish, clouded with brown; apex obtuse; aperture large, ear-shaped, with two plaits, margin thick.

WEINLAND. Malak. Bl. ix. 1862.

Hab. Bahamas.

Species 16. (Mus. Sowerby.)

PUPA MARTINIANA. *Pup. testâ brevissimâ, obscure rosâ, breviter profundè rimatâ, subpyramidatâ liris distantibus, subarcuatâ, propè suturam nodulosâ sculptâ; aperturâ subauriformi, margine crasso, supernè angulatâ, labio interno ad anfractum ultimum uniplicato, columellâ viz plicatâ.*

MARTIN'S PUPA. Shell very short, dull rose, shortly, deeply notched, subpyramidal; sculptured with distant ridges, nodulous near the suture; aperture rather auriform, margin thick, angular above, inner lip with a plait on the last whorl, columella scarcely plaited.

KÜSTER. Pfeiffer, Mon. II. p. 317.

Hab. — ?

This shell is remarkable for having a little knob on the top of each rib at the suture.



16^a



17



18^a



19



20



21



22^a



23



24^a



25

P U P A.

PLATE III.

Species 17. (Mus. Brit.)

PUPA DETRITA. *Pap. testâ brevifidâ, tenui, cylindricoâ, profundè rimatâ, pallidâ; apice obtuso, glaucescenti; aperturâ anticâ obliquè productâ; labio interno levit, plicâ minutâ minuto, columellâ rectiusculâ.*

THE WORN PUPA. Shell smooth, thin, cylindrical, deeply notched, pale; apex obtuse, yellowish; aperture anteriorly obliquely produced; inner lip thin, provided with a very small plait, columella rather straight.

SHUTTLEWORTH. *Pflr. Mon. VI. as incana var.*
Hab. Florida.

Species 18. (Fig. a. b. Mus. Sowerby.)

PUPA STRIATELLA. *Pap. testâ brevi, pallidâ griseo-centâ et subcassâ, fusco-rubescenti variegatâ; tenuiter et regulariter lineatâ, profundè rimatâ; labio interno plicâ dentiformi validâ minuto, columellâ profundè, brevi, uniplicatâ.*

THE SMALL-STRIATED PUPA. Shell short, pale greyish or slightly pink, variegated with reddish brown, finely and regularly ridged; deeply notched; inner lip provided with a strong tooth-like plait, columella deep, short, with one fold.

FERRUSSAC. *Pfeiffer Mon. VI. p. 202.*
Hab. Cuba, Haiti, Porto Rico, &c.

Species 19. (Mus. Sowerby.)

PUPA SAGRAIANA. *Pap. testâ breviusculâ, subhevigatâ, griseo-rubescuntâ, rubro-fuscescenti marmoratâ, profundè rimatâ; aperturâ auriformi, magnâ, margine crasso, labio interno et columellâ uniplicatis.*

SAGRA'S PUPA. Shell rather short, rather smooth, greyish-red marbled with brownish-red, deeply

notched; aperture auriform, large, margin thick, inner lip and columella with one plait each.

PREIFFER. *Monographia Helicæorum II. p. 322.*
Hab. Cuba.

Species 20. (Mus. Sowerby.)

PUPA MARITIMA. *Pap. testâ pallidâ crenulatâ, subpyramidatâ, distanter, leviter costatâ, inter costas planulatâ, longè rimatâ, profundè umbilicatâ; aperturâ intus griseo-fulvâ, profundâ, subtrigonâ, margine crasso, latè reflexo, columellâ profundissimâ, intus leviter plicatâ, labio interno tenuiter uniplicatâ.*

THE MARITIME PUPA. Shell pale bluish, rather pyramidal, distantly, lightly ribbed, flattened between the ribs; with a long notch, and deep umbilicus; aperture fulvous grey within, deep, almost trigonal, margin thick, broadly reflected, columella very deep, slightly plaited within; inner lip with a thin plait.

PREIFFER. *Monographia II. p. 322.*
Hab. Cuba.

Species 21. (Mus. Sowerby.)

PUPA RUMIS. *Pap. testâ obesâ, albidâ, tenui, costellis acutis, distantibus lineatâ, obliquè rimatâ; aperturâ magnâ, superâ infraque acuminatâ, margine angustâ, reflexo, labio interno plicâ elongatâ validâ minuto; columellâ rîc plicatâ.*

THE ROUGH PUPA. Shell obese, whitish, thin, ridged with sharp, distant riblets, obliquely notched; aperture large, acuminated above and below, margin narrow, reflected, inner lip provided with an elongated strong plait, columella scarcely plaited.

PREIFFER. *Monographia Helicæorum IV. 657.*
Hab. —? —?

Species 23. (Mus. Brit.)

PUPA IOSTOMA. *Pup. testâ cylindricâ, latâ, distanter leviter liratâ, cœruleo-albidâ, rubro-purpurascenti marmoratâ et strigatâ, anfractibus albis, rectis, apice acuminato, aperturâ crassâ violaceâ, biplicatâ.*

THE PURPLE-MOUTHED PUPA. Shell cylindrical, broad, distantly lightly ridged, blueish-white marbled or striped with reddish-purple, whorls elevated, straight, apex acuminated, aperture thick, violet, two-plaited.

PFEIFFER. Monographia Helicæorum IV. p. 656.

Hab. Cuba.

The violet colour of the interior of the month is very peculiar.

Species 23. (Fig. a, b, Mus. Brit.)

PUPA ALVEARIA. *Pup. testâ subcylindricâ, angustâ, griseo-roseo-centi, vel purpureo inter costas, versâs apicem attenuatâ, acuminatâ, costis crassiusculis numerosis; aperturâ brevi, subrotundâ, labio interno acutâ et minutâ uniplicatâ.*

THE BEEHIVE PUPA. Shell cylindrical, narrow, grey-

ish-pink or purple between the ribs, attenuated towards the apex, acuminated, with rather thick, numerous ribs, aperture short, rather round, inner lip with a sharp, small plait.

DILWYN (Turbo). Pfeiffer II. 315.

Bulinus fusus, Bruguière.

Pupa fusus, Lamarck.

Pupa rubicunda, Montse.

Hab. Bahamas.

Species 24. (Mus. Brit. and Sowerby.)

PUPA WEINLANDI. *Pup. testâ elevatâ, cylindricâ, breviter liratâ, pallidâ rubescenti, fusco strigatâ; apice attenuato, anfractu ultimo obliquè breviter rimato; aperturâ magnâ, intus fuscâ, labio interno vix plicato.*

WEINLAND'S PUPA. Shell elevated, cylindrical, finely ridged, pale reddish, striped with brown, apex attenuated; last whorl obliquely, shortly notched; aperture large, brown within, inner lip scarcely plaited.

KUER, MS. Pfeiffer, Mon. VI. p. 290.

Hab. Crooked Island, Bahamas.



P U P A.

PLATE IV.

Species 25. (Mus. Brit.)

PUPA SEMIALB. *Pup. testā parvā, levī, subcylindricā, versis apicem attenuatā, cornū, vel fusco-purpureascenti, obliquē rimatā; aperturā subquadratā; margine interno quinqueplicato.*

THE EYE PUPA. Shell small, thin, subcylindrical, attenuated towards the apex, horny or purplish-brown, obliquely notched; aperture rather square, inner margin five-plaited.

DEMPSEY. Mol. Fluv. et Ter.

Pupa juniperi, Fleming.

Holix cylindrica, Stüder.

Hab. Europe.

Species 26. (Mus. Theobald.)

PUPA TERTIOIDES. *Pup. testā parvā, pallidā, cylindricā, leviter levatā, suprà medium tumidiusculā, rimatā, aperturā subauriformi; labio inferno uniplicato, labio externo suprà medium sinuatum contracto.*

THE FURTIVE PUPA. Shell small, pale, cylindrical, finely ridged, rather more tumid above the middle, notched, aperture somewhat auriform; inner lip single-plaited, outer lip sinuously contracted above the middle.

THEOBALD. Journ. Asiat. Soc. Beng. 1870.

Hab. Shan Provinces.

A little like *P. Blanfordi*, but not so tapering downwards, and quite different in the plaits of the mouth.

Species 27. (Mus. Sievers.)

PUPA PHASIANUS. *Pup. testā albā, parvā, brevī, levī, latē rimatā, versis apicem subattenuatā; anfractibus quinque, ultimo magno; aperturā subquadratā, margine interno labiis sexplicato.*

THE PHEASANT PUPA. Shell white, small, short,

smooth, broad, a little attenuated towards the apex; whorls five, the last large, notched; aperture rather square, inner margin of the lips with six plaits.

DUBOIS, Journ. de Conch. 1873.

Hab. Central Russia.

Species 28. (Mus. Gassies.)

PUPA LIFOUANA. *Pup. testā minutā, latē, latē umbilicatā, tenuissimē et regulariter striatā, nitentē, cornū, ultimo anfracta ad medium fusco unijasciato; suturā minutissimē crenulatā, anfractibus 6, superioribus brevibus, inferioribus altis; aperturā obliquā, quadripliatā, plicis parietalibus, and superiori maximi, alterā parvā; plicis columellari et labiali parvis.*

THE LIFE PUPA. Shell minute, broad, broadly umbilicated, very finely and regularly striated, shiny, horny, and with a brown band in the middle of the last whorl; suture very finely crenulated; whorls 6, upper ones short, lower ones high; aperture oblique, with four plaits: parietal plaits, one superior, very large, the other small; columellar and labial plaits small.

GASSIES. Fauna Caledonia, Pt. 2, p. 98. 1871.

Hab. Lifou, of the Loyalty Group.

Species 29. (Mus. Sievers.)

PUPA SIEVERSI. *Pup. testā cylindricā, angustā, pallidissimē fulvā, anfractibus 7, ultimo alto, rimatā, subperforatā, medianis subequalibus; apice obtuso; aperturā trigonā, triplicatā.*

SIEVERS' PUPA. Shell cylindrical, narrow, very pale fulvous, whorls 7, the last high, notched. Slightly perforated, middle ones nearly equal; apex obtuse; aperture trigonal, three-plaited.

MOUSSON. Journ. de Conchyliologie, Pl. VII. f. 6.

Hab. Alluvial sands of Asia.

PUPA.—PLATE IV.

Species 30. (Mus. Hanley.)

PUPA BLANFORDI. *Pup. testā cylindricā, albā, rimatā, prope apicem ventricosā, infā attenuatā, teniter liratā, anfractibus 8, ultimo angustato; aperturā subquadratā, plicis parietali, columellari et labiali mediocribus.*

BLANFORD'S PUPA. Shell cylindrical, whitish, notched, ventricose near the apex, attenuated below, finely ridged, whorls 8, the last narrow; aperture rather square, parietal, columellar and labial plaits middle-sized.

GODWIN AUSTIN. Proc. Zool. 1872.

Hab. Khasi Hills.

Species 31. (Fig. a, b, Mus. Crosse.)

PUPA MARIEL. *Pup. testā minūtā, fusco-ornatā, brevis, inflatā, tenui; anfractibus 4, ultimo subumbilicato, supā mediā subcontracto; aperturā obliquā, margine reflexo, tenui, supā mediā sinuatim contracta, plicis parietalibus duabus, parvis.*

MARIE'S PUPA. Shell minute, brown-horny, short, inflated, thin; whorls 4, last slightly umbilicated, a little contracted above the middle; aperture oblique, margin reflected, thin, sinuously contracted above the middle, parietal plait two, small.

CROSSE. Journ. Conch. 1871, p. 202.

Hab. Environs of Noumea.

Species 32. (Mus. Hutton.)

PUPA LATIPARIA. *Pup. testā parvā, corneā, altā, rimatā, cylindricā, leviter striatā, anfractibus 7, inferioribus altis, rectis, subequalibus, apice obtuso; aperturā subovātā, obliquā, anticā productā, plicis 4, parietali oblongatā, valido, columellari et labiali superiori parvis, inferiori elongatā.*

THE STONY PUPA. Shell small, horny, high, notched, cylindrical, smoothly striated, whorls 7, lower

ones high, straight, nearly equal, apex obtuse; aperture rather oval, oblique, anteriorly produced, plaits 4, parietal one elongated, strong, columellar and upper labial small, lower elongated.

HUTTON. Asiatic Society of Bengal, 1870, p. 490.

Hab. Afghanistan.

Species 33. (Mus. Hanley.)

PUPA RATHYODON. *Pupa testā minūtā, brevitatā, fusci, breviusculā, subpyramidalē, spirā versās apicem attenuatā, anfractibus 5; rotundis, ultimo rimatō, aperturā obliquā, subovātā, margine rubro, plicis una parietali, duabus columellaribus, duabus labialibus; columellā obliquā.*

THE DEEP-TOOTHED PUPA. Shell minute, smooth, brown, rather short, rather pyramidal, spire attenuated towards the apex, whorls 5, rounded, last notched, aperture oblique, rather ovate, margin red, plaits one parietal, two columellar, two labial; columella oblique.

BENSON. Annals of Natural History, 1848.

Hab. Nerbudda.

Species 34. (Mus. Gassies.)

PUPA OBSTRUCTA. *Pup. testā albā, minūtā, subovātā, laevi, leviter umbilicatā, anfractibus 5, convexis, ultimo inflato, alto; apice pyramidalē, obtuso; aperturā subtrigoni, plicā parietali, magnā, perpendiculari, calidā.*

THE OBSTRUCTED PUPA. Shell whitish, minute, sub-ovate, smooth, slightly umbilicated, whorls 5, convex, last inflated, high; apex pyramidal, obtuse; aperture subtrigonal, parietal plait large, perpendicular, strong.

GASSIES. Fauna Caledonia, 1871, p. 97.

Hab. Environs of Noumea and Conception.

P U P A.

PLATE V.

Species 35. (Mus. Hanley.)

PUPA MICROTRAGES. *Pup. testâ brevi, post labium arcuatum rimatâ, cornuâ, levi, semipellucidâ; altilimâ anfractu elevato; aperturâ albâ, intus contractâ; labiâ subplanulato; dentibus superâ columellâ uni, perpendiculari, acutâ; uno ad columellâ sursum aequali, uno ad marginem inferiorem labii externi latè planulato.*

THE DRAG-NET PUPA. Shell short, notched in a curve behind the lip, horny, thin, semi-pellucid; last whorl elevated; aperture white, contracted within; lip rather flattened; teeth, one above the columella perpendicular, acute; one on the columella sloped upwards; one on the inner margin of the outer lip, broadly flattened.

PARMEYS (Bulimus). Pfr. Bl. Malak. 12, 1865.
Hab. Greece.

Species 36. (Mus. Hanley.)

PUPA TRICRISIS. *Pup. testâ tenui, coracâ, breviter rimatâ, brevi, anfractibus sex, altilimâ subelevato, aperturâ latissimâ, margine levi, albâ, dentibus tribus conspicuis acutis.*

THE THREE-STAR PUPA. Shell thin, horny, shortly notched, short, whorls six, the last rather raised, aperture rather broad, margin thin, white, armed with three conspicuous teeth.

ROSSEFELDER (Bulimus). Pfr. Mon. Helicorum — 1868, p. 68.

Hab. Asia Minor.

This species has been placed with *Pupa Bergerii*, as a variety, but is much shorter, with fewer whorls and a thinner peritreme.

Species 37. (Mus. Hanley.)

PUPA BERGERII. *Pup. testâ elatâ, subventricosâ, albâ vel purpureâ, breviter rimatâ, anfractibus 8, gradatim crescentibus; aperturâ albâ, auriformi, superâ acuminatâ, margine crassâ, dentibus tribus crassis acutis armata.*

BERGER'S PUPA. Shell elevated, rather ventricose, white or purple, shortly notched, whorls 8, gradually increasing; aperture white, ear-shaped, pointed above, margin thick, armed with three thick and sharp teeth.

ROTHMAN (Bulimus). Pfeiffer, Monographia Helicorum, 1868, p. 68.

Chondrus Bergerii, Monson.

Hab. Southern Europe.

See observation on the preceding species.

Species 38. (Mus. Hanley.)

PUPA SULPACIA. *Pup. testâ ventricosâ, crassiusculâ, cornuâ; spirâ elatâ, trochiformi, anfractibus aequaliter crescentibus, obliquè latis, suturâ profundâ; altilimâ anfractu planiusculâ, transversè rimatâ, aperturâ obliquè productâ; superâ subquadrate, margine crassâ, rigata; columellâ crescenticulâ.*

THE GROOVED PUPA. Shell ventricose, rather thick, horny; spire obtuse, trochiform, whorls equally increasing, obliquely ridged, suture deep; last whorl rather smooth, transversely notched, aperture obliquely produced, rather square above, margin thick, reflected; columella rather straight.

BERGTRE (Bulimus). Enc. Mel.

Gibbus Chondrus, Adams.

Hab. Mauritius.

Species 39. (Mus. Hanley.)

PUPA ELATA. *Pup. testâ subfusiformi, purpureo-cornuâ; spirâ elatâ, anfractibus 7, lente crescentibus, convexiusculis, altilimâ elatâ, viz rimatâ; aperturâ subovâtâ, margine albâ, crassiusculâ, subplanulato, dentibus duobus, parvis, uno superâ columellâ acutâ, uno ad marginem inferiorem labii externi elevato; columellâ elentulâ.*

THE ELEVATED PUPA. Shell subfusiform, purplish-horny; spire elevated, whorls 7, slowly increasing, rather convex, the last raised, scarcely notched; aperture rather oval, margin whitish, rather thick, rather flattened, teeth two, small, one above the columella, sharp; one on the inner margin of the outer lip, elevated; columella without teeth.

SCHMIDT. — ? MS.

Hab. Carinthia.

This species belongs to the 'Chondrus' group.

Species 40. (Mus. Hanley.)

PUPA QUADRIDENS. *Pup. testā elatā, subcylindricā, purpureo-fusā, tenui, angustā, sinistrā; spirā elevatā, anfractibus 8, rectiusculis, levit crescentibus; aperturā brevī, subtrigoniā; margine albo, planulato; dentibus labii externi uno, anfractibus ultimi uno, columelle duobus.*

THE FOUR-TOOTHED PUPA. Shell raised, subcylindrical, purple-brown, thin, narrow, sinistral; spire raised, whorls 8, rather straight, slowly increasing; aperture short, rather trigonal; margin white, flattened; teeth, one on the body whorl, one on the outer lip, and two on the columella.

MILLER (Pupa). Pfr. (Balimus), Mon. Hel. 1868, p. 69. Genus 'chondrala.'

Hab. Southern Europe.

Species 41. (Mus. Hanley.)

PUPA PAGODA. *Pup. testā solidiusculā, viridifusā, castaneo-lineatā, tenuiter limbatā, ventricosā, latā; spirā trochiformi; ultimo anfractu ad saturam gibbo, tūm declivē, infra profundē, longē et transversē rimato; aperturā altā, obliquē productā, subquadrata, margine incrassato, edentulo.*

THE PAGODA PUPA. Shell rather solid, greenish-brown, with chestnut lines, finely ridged, ventricose, broad; spire trochiform; last whorl gibbous at the suture, then sloped downwards, with a deep, long, and transverse notch below; aperture white, obliquely produced, rather square, margin thickened, toothless.

FERRUSAC (Helix), Pfr. (Pupa), Mon. Hel. 1868, p. 287.

Helix concamerata, Wood.

Papa fidula, Mentze.

Hab. Mauritius.

Belonging to the 'Gibbus' or 'Gonidomus' section.

Species 42. (Mus. Hanley.)

PUPA VARIABILIS. *Pup. testā elongato-cylindricā, purpureo-fusā, solidiusculā, spirā elevatissimā, anfractibus 13, rectiusculis, levit crescentibus, ultimo transversē rimato; aperturā magnā; margine albo, subincrassato, labio externo supra medium tumido, plicis anfractibus ultimi minutā, plicis columellaribus duabus, minutis, plicis internis duabus, lamelliformibus.*

THE VARIABLE PUPA. Shell elongated-cylindrical, purple-brown, rather solid, spire much raised, whorls 13, rather straight, slowly increasing, the last transversely notched; aperture large; margin white, rather thickened, outer lip tumid above the middle, fold of the body whorl minute, columellar folds two, small, internal folds two, lamelliform.

DEAPENAUD. Coq. Flov. et Terr.

Helix notabilis, Ferrussac.

Papa multidentata, Olivier.

Hab. France, Spain, Greece.

Species 43. (Mus. Hanley.)

PUPA QUINQUEIDENTATA. *Pup. testā subfusiformi, elongatā, grisea, fusco-variegatā, levigatā; spirā elevatissimā, medio subinflatā, anfractibus 10, concentricis; ultimo obliquē rimato; aperturā ovatā, plicis internis tribus, plicē columellari una, plicē anfractibus ultimi parvā, margine tenui.*

THE FIVE-TOOTHED PUPA. Shell rather fusiform, elongated, grey, variegated with brown, smooth; with elevated spire; a little inflated in the middle; whorls ten, rather convex; the last obliquely notched; aperture ovate, interior folds three, columellar fold one, fold on the body-whorl small; margin thin.

BORN. — ? Pfr. Mon. Hel.

Balimus similis, Brugnière.

Jamnia quinqueidentata, Risso.

Hab. Southern Europe.

Species 44. (Mus. Hanley.)

PUPA FRUMENTUM. *Pup. testā parvā, subfusiformi, fusā, levigatā; spirā elevatā, medio subinflatā; anfractibus 11, levit crescentibus; ultimo longē rimato; aperturā latiusculā, colorellā profundā, latissimā, labio bilobatā; deute anfractibus ultimi parvo, plicis internis quatuor, lamelliformibus, ad dorsum apparentibus.*

THE CORN PUPA. Shell small, rather fusiform, brown, smooth; spire elevated, a little inflated in the middle; whorls 11, slowly increasing; the last with a long notch; aperture rather broad, columella deep, very broad, with two interior teeth; tooth of the body whorl small, internal folds four, lamelliform.

DEAPENAUD. Coq. Flav. et Ter.

Papa curta, Potiez et Michaud.

Hab. Southern Europe.



PUPA.

PLATE VI.

Species 45. (Mus. Hanley.)

PUPA SEPTEMDENTATA. *Pup. testē brevi, ventricosā, albā, brevitatē; spirā brevissimā, anfractibus 4, rapidē crescentibus, angustis, concolorisculis; ultimo rectiusculo, elato, post labium internum obliquē breviter rimatō; aperturā brevī, subovatā, margine interno septemdentatā, margine externo acutā.*

THE SEVEN-TOOTHED PUPA. Shell short, ventricose, white, smooth; spire very short, whorls 4, quickly increased, narrow, rather convex; the last rather straight, elevated, with a short oblique notch behind the inner lip; aperture short, rather ovate; inner margin seven-toothed, outer margin sharp.

ROTHMAN. —? Pfr. (Bulimus). Mon. Hel. 1868, p. 79.

Hab. Syria.

Belonging to the 'Chondrus' group of species.

Species 46. (Mus. Hanley.)

PUPA GULANIS. *Pup. testē parvā, fuscā, brevitatē, cylindricā; spirā obtusā, elongatā, anfractibus 7, medianis rix crescentibus; ultimo profundē rimatō, aperturā brevī, angustatā, labio externo intūs incrassatō, columellā multiplicatā, anfractu ultimo super columellā plicā elongatā munitō.*

THE THROAT PUPA. Shell small, brown, smooth, cylindrical; spire obtuse, elongated, whorls 7, middle ones scarcely increasing; last deeply notched; aperture short, narrow, outer lip thickened within, columella with one plait; last whorl provided with one plait above the columella.

ROSSMÄSLER. Pfr. Mon. Hel. 1868, vol. 6, p. 305.

Hab. Transylvania, &c.

Species 47. (Mus. Hanley.)

PUPA TRIDENS. *Pup. testē subovatā, pallidissimā, rubescentē, spirā elevatā, anfractibus 6, superioribus 5 angustis, subingatis, ultimo elevato, breviter rimatō; aperturā subovatā, margine reflexo, subplaculatō, intūs tridentatō.*

THE THREE-TOOTHED PUPA. Shell subovate; very pale reddish, spire raised, whorls 6, upper 5 narrow, rather inflated, last raised, with a short notch; aperture rather oval, margin reflected, rather flattened, three-toothed within.

MÜLLER (Helix). Pfr. (Bulimus). Mon. Hel. 1868, vol. 6, p. 69.

Hab. Central Europe.

Belongs to the 'Chondrus' group.

Species 48. (Mus. Hanley.)

PUPA PALANGA. *Pup. testē elongatō-cylindricā, epidermide corneo indatā, solidā, regulariter obliquē liratā; spirā elevatā, obtusissimā; anfractibus 7, medianis levē crescentibus, ultimo elongatō, breviter rimatō; aperturā subquadratā; peritremate continuo, margine rotundā, super anfractum ultimum multiplicatā.*

THE CLUB PUPA. Shell elongated, cylindrical, covered with horny epidermis, solid, regularly obliquely ridged; spire elevated, very obtuse; whorls 7, the middle ones slowly increasing, last elongated, shortly notched; aperture rather square; peritreme continuous, margin rounded with a single tooth upon the last whorl.

LESSOS. —? Pfr. Mon. Hel. 1868, vol. 6, p. 293.

Pupa facies. Potiez et Mich.

Hab. Isle of France.

Species 49. (Mus. Hanley.)

PUPA QUINQUEDEXATA. *Pup. testē pallidē fuscā, subacutā, brevitatē; spirā elevatā, pupiformi, inflatā; anfractibus 7, levē crescentibus, ultimo longē rimatō; aperturā subtriangulā, margine albo, corneo, crasso, reflexo, ad suturam callosō; plicis dentiformibus quinque munitō.*

THE FIVE-TOOTHED PUPA. Shell pale fulvous, subovate, smooth; spire elevated, pupa-shaped, inflated; whorls 7, slowly increasing, the last with a long notch; aperture subtriangular, margin white, continuous, thick, reflected, callous at the suture, provided with five tooth-shaped plaits.

MICHELETTI.—Pfr. Mon. Hel. 1868, vol. 6 (Bulimus), p. 68.

Pupa quinqueplicata. Potiez et Michaud.

Hab. Dahurata.

A species of the 'Chondrus' or 'Chondrula' group, resembling *Pupa tricuspid*, but having a second small plait on the body whorl, and the same on the columella, making, with the large one on the outer lip, five tooth-like projections.

Species 50. (Mus. Hanley.)

PUPA SPRETA. *Pup. testā ovato-acuminatā, pallide fulvā, tenuiter striatā; spirā elevatā, anfractibus 6, convexiusculis, tribus apicalibus rapidē crescentibus, medianis subequalibus, ultimo alto breviter rimato; aperturā breviusculā, subauriformi, margine albo, crasso, reflexo, lato, subplanulato, intis tridentato.*

THE SLIGHTED PUPA. Shell ovate-acuminated, pale fulvous, finely striated; spire elevated, whorls 6, rather convex, the three of the apex quickly enlarging, the middle nearly equal, the last high, with a short notch; aperture rather short; rather auriform, margin white, thick, reflected, broad, rather flattened, three-toothed within.

REEVE (*Bulimus spreus*). *Conch. Leon. Monog. Bulimus*.

It was not observed, till after figuring this shell, that it had been admitted among the *Bulimi*. It belongs to the 'Chondrus' group.

Species 51. (Mus. Hanley.)

PUPA NEWTONI. *Pup. testā obliquē elongato-ovatā, obliquē costatā, pallide luteā; spirā subtrochiformi, suturā profundā, anfractibus 6, convexiusculis, ultimo profundē rimato, anticē ascendenti; aperturā obliquē oblongā, margine breviter expanso, tenuiter rotundo, per callum super anfractum ultimam continuo, columellā obliquā.*

NEWTON'S PUPA. Shell obliquely elongated ovate, obliquely ribbed, pale yellowish; spire rather trochiform, with a deep suture; whorls 6, rather convex, the last with a deep notch, anteriorly ascending; aperture obliquely oblong, margin shortly expanded, thinly rounded, continued by a callus on the last whorl, columella oblique.

H. ADAMS (*Gibbus*). *Proc. Zool. Soc.* 1867, p. 305. *Hab.* Stag's Cave in the Mauritius.

Thinner, narrower, and more finely sculptured than *Pupa sulcata*.

Species 52. (Mus. Hanley.)

PUPA DEALBATA. *Pup. testā oblongā, obtusissimē cylindricā, albā, tenuissimē striatā; spirā truncatā, anfractibus 5, superioribus inflatis; ultimo profundē rimato, subangustato; aperturā subquadratā, latā, anticē rotunda, posticē subtruncatā.*

THE WHITENED PUPA. Shell oblong, very obtusely cylindrical, white, very finely striated; spire truncated, whorls 5, the upper ones inflated, last with a deep notch, rather narrow; aperture subquadrate, broad, anteriorly rounded, posterior rather truncated.

WEBBS. *Pfr. Mon. Hel.* 1868, vol. 6, p. 287.

Hab. Canary Islands.

Differing from 'P. modiolus' (Sp. 54) in the enlargement of the upper whorls.

Species 53. (Mus. Hanley.)

PUPA SEDUCTILIS. *Pup. testā sinistrorsā pallidē, fuleā, cylindricā, levē, spirā elevatā, anfractibus 8, medianis lentē crescentibus subequalibus, ultimo indistinctē rimato; aperturā brevī, margine crasso, intis validē tridentatā.*

THE SEDUCTIVE PUPA. Shell pale fulvous, cylindrical, smooth, spire elevated, whorls 8, middle ones slowly increasing, nearly equal, last with an indistinct notch; aperture short, margin thick, strong, with three strong teeth within.

ZEIGLER.—*Pfr. Mon. Hel. (Bulimus)*, 1868, vol. 6 (*Bulimus*), p. 69.

Bulimus Niso, Pfeiffer. *Olim.*

Hab. Central Europe.

Of the 'Chondrus' group.

Species 54. (Mus. Hanley.)

PUPA MODIOLUS. *Pup. testā breviter cylindricā, albidd, tenuiter obliquē striatā, spirā versis apicem paulo attenuatā, anfractibus 6, apicalibus obtusis, ultimo profundē rimato; aperturā anticē ascendenti subquadratā, margine albo, subexpanso, levē.*

THE BUCKEL PUPA. Shell shortly cylindrical, whitish, finely obliquely striated, spire a little tapering towards the apex, whorls 6, apical ones obtuse, the last deeply notched; aperture raised in front, rather square, margin white, rather expanded, smooth.

FERRUSSAC.—*Pfr. Mon. Hel.* 1868, vol. 6, p. 293.

Hab. Isle of France (Bourbon).

Of the 'Gibbus' group, much shorter than 'Pupa palanga.'



P U P A.

PLATE VII.

Species 55. (Mus. Hanley.)

PUPA POLIUM. *Pap. testâ cornuâ, tenuiter oblique striatâ, cylindricâ, elatâ; anfractibus decem, depressis, medianis subequalibus, superioribus subito contractis, ultimo longè rimato, spirâ obtusâ; aperturâ super ultimâ anfractum elatâ, margine albo; columellâ biplicatâ, ultimo anfractu prope labium externum uniplicatâ.*

THE TEN PUPA. Shell horny, finely obliquely striated, cylindrical, raised; whorls ten, depressed, middle nearly equal, the upper ones suddenly contracted, the last with a long notch, spire obtuse, aperture raised on the last whorl, margin white; columella two-plaited, last whorl with a single plait near the outer lip.

DRAPARNAUD. Mol. Terest. et Fluv.
Hab. Spain. France. Germany.

Species 56. (Mus. Hanley.)

PUPA MUSTERDA. *Pap. testâ fusco-ornatâ, breviusculâ, altâ, subcylindricâ; anfractibus quinque, ultimo profundè rimatâ, penultimo intus, superioribus gradatim attenuatis, apice obtusâ; aperturâ subquadratâ, plicis tribus, una ad medianâ labii interni, una ad medianâ columellâ, una intus aperturam locatis.*

THE MUSTERDA PUPA. Shell horny-brown, rather smooth, elevated, subcylindrical; whorls five, last deeply notched, penultimate inflated, upper gradually attenuated, apex obtuse; aperture subquadrate, plaits three, one placed at the middle of the inner lip, one at the middle of the columella, and one within the aperture.

BENSON, v. Hanley's Indian Shells.
Hab. Ceylon.

Species 57. (Mus. Hanley.)

PUPA PLANGUNCULA. *Pap. testâ albâ, politâ, pollicidâ, altâ, cylindricâ; anfractibus quinque, rectilioribus, primo altissimè compresso, ultimo oblique rimato, umbilicato; suturâ profundâ; aperturâ contractâ, plicâ columellari crassâ, quasi*

duplicatâ, callo labii interni maximo, labio externo continuo marginato, medio sinuato contracto, latere triplicato, plicâ medianâ elongatâ, acutâ.

THE PUPPER PUPA. Shell white, polished, pellucid, elevated, cylindrical; whorls five, straight-sided, the first very obtusely compressed, the last obliquely notched, umbilicated; suture deep; aperture contracted, columellar fold thick, as it were duplicated, callus of the inner lip very large, outer lip neatly bordered, sinuously contracted in the middle, with three plaits inside, the middle plait elongated, acute.

BENSON, v. Hanley's Ind. Shells.
Hab. Kumah Hills.

Species 58. (Mus. Hanley.)

PUPA SCULPIA. *Pap. testâ angustâ, attenuatâ, albâ; anfractibus octo, apicibus brevissimis, medianis et inferioribus concavis et crebrè plicatis, ad suturam crenulatis; ultimo rimato, aperturâ latiusculâ, plicâ suturâ maximâ, plicâ columellari lamelliformi, plicâ internâ solidâ.*

THE SCULPTURED PUPA. Shell narrow, attenuated, whitish; whorls eight, those at the apex smooth, middle and lower neatly and closely plaited, crenulated at the suture; the last notched; aperture rather broad, sutural plait very large, columellar plait lamelliform, inner plait strong.

BENSON, v. Hanley's Ind. Shells.
Hab.—? India.

Species 59. (Mus. Hanley.)

PUPA FILOSA. *Pap. parvâ, fusco-nigrescenti; anfractibus quatuor, tribus inflatis, rapidè crescentibus, filoso-striatis, ultimo breviusculâ, breviter rimato; aperturâ uniformi, quinque-plicatâ.*

THE THREADED PUPA. Shell small, blackish brown; whorls four, three inflated, rapidly increased, with thread-like striae, the last rather short, shortly notched; aperture ear-shaped, five-plaited.

THEOBALD, Hanley's Indian Shells.
Hab. India.

PUPA.—PLATE VII.

Species 60. (Mus. Hanley.)

PUPA AVANICA. *Pup. pellucidâ, parvâ, levî, subcylindricâ; anfractibus quinque, depressiusculis, rotundis, convexissimis; ultimo breviter rimato, adscendenti; aperturâ latiusculâ, collo crasso, magno, bifido, parietali prope suturam anfractibus ultimâ, columellâ biplicatâ; labio externo albo, lato; plicis palatalibus tribus.*

THE AVA PUPA. Shell pellucid, small, smooth, subcylindrical; whorls five, rather depressed, round, very convex; the last shortly notched, ascending; aperture rather broad, with a thick, large, divided parietal callus near the suture of the last whorl, columella with two plaits, outer lip white, broad; palatal plaits three.

BENSON. Ann. and Mag. of Nat. Hist. Dec. 1863, p. 424.

Hab. Ava. Blanford.

Species 61. (Mus. Hanley.)

PUPA MINULA. *Pup. testâ minutâ, ventricosâ, subviridi-cornâ, tenuiter striatâ, anfractibus quatuor, convexis, apicali obtusissimâ, ultimo vix adscendenti, brevissimè rimato; aperturâ subquadratâ, acutissimè quinque-dentatâ.*

THE MINIE PUPA. Shell minute, ventricose, greenish-horn, finely striated, whorls 4, convex, the apical one very obtuse, the last scarcely raised, very shortly notched, very sharply five-toothed.

BENSON, Hanley's Indian Shells.

Hab. Ceylon.

The five tooth-like plaits, one on the body-whorl, two on the columella, and two on the outer lip, nearly meet in the middle.

Species 62. (Mus. — ? Copied.)

PUPA SALEMANENSIS. *Pup. testâ minutissimâ, conicâ, costellatâ, anfractibus quinque, gradatim crescentibus, ultimo profundè rimato; aperturâ auriformi, plicis dentiformibus, duobus parietalibus, uni medio labii externi prominenti armatâ.*

SALEMAN'S PUPA. Shell very minute, conical, finely ribbed, whorls five, gradually increasing, the last deeply notched; aperture ear-shaped, armed with

tooth-like plaits, two parietal, one prominent on the outer lip.

BLANFORD (Eumec). Contributions to Ind. Mal. No. 2, 1861, p. 13, t. 2. f. 8.

Hab. India.

Species 63. (Mus. Brit.)

PUPA INDICA. *Pupâ testâ parvâ, subcylindricâ, cornâ, semipellucidâ, anfractibus quinque, leviusculis, tribus superioribus rapidè crescentibus, rotundis, penultima et ultima rectiusculis, ultimo subelongato, breviter rimato; aperturâ subquadratâ, marginè crasso, reflexo, quadridentato.*

THE INDIAN PUPA. Shell small, subcylindrical, horny, semipellucid, whorls five, rather smooth, the three upper ones quickly increased, rounded, the penultimate and last rather straight, the last rather long, with a short notch; aperture rather square, with thick, reflected four-toothed margin.

PFEIFFER. Mon. Helic. IV. 679.

Hab. Barrakpore, India.

Species 64. (Mus. — ? Copied.)

PUPA CYLINDRELLŌIDEA. *Pup. testâ parvâ, attenuatâ, albâ, apice obtusa, medio ventricosâ, basi subconico; anfractibus 10, convexiusculis, profundè suturatis; primis tribus levigatis, hyalinis, ceteris conjertim costulatis, ultimo infusè subcarinato, obliquè soluto, paulò descendenti; aperturâ paulò obliquâ, ovato-subrotundâ, suprâ prope angulum posteriorem lamellâ obliquâ, crassissimâ, valdè contractâ, labio externo superâ prope angulum unidentato.*

THE CYLINDRELLA-SHAPED PUPA. Shell small, attenuated, white, apex obtuse, middle ventricose, rather contracted at the base; whorls ten, rather convex, with a deep suture; the three first smooth, glassy, the rest closely ribbed, the last slightly keeled below, obliquely separated, a little descending; aperture a little oblique, ovate-rounded, with an oblique, very thick, strongly curved lamina above, near the posterior angle, outer lip with a single tooth on the outer lip above near the angle.

STOLICZKA. Journ. As. Soc. Bengal. Vol. XL. Pt. II. 1871.

Hab. Mouhelin, India.



P U P A.

PLATE VIII.

Species 65. (Mus. Hanley.)

PUPA KOKIEMI. *Pap. testā albā, semipellucidā, brevī, pyramidalī, brevis; anfractibus septem, rotundis, levibus, primū obtusē depresso, ultimū ventricosū, profundē rimatū et umbilicatū; aperturā eduli adscendēti, parvā, plicis decliviusculis super anfractum ultimū duabus, ad columellam unā, ad marginem internū latius externi trilobis majoribus, ceteris intercalatis parvis.*

KOKIEMI'S PUPA. Shell white, semipellucid, smooth, pyramidal, short; whorls seven, rounded, short, the first obtusely depressed; last ventricose, deeply notched and umbilicated, aperture strongly ascending, small, with two tooth-like plaits on the body whorl, one at the columella, three larger on the inner edge of the outer lip, and others small, intermediate.

ROSMÄSELE. Pfeiffer, Mon. Hel. II. 353.

Helix Mocciaudi, Fer.

Hel. Dalmatia.

A curious little shell, with the aperture turned up towards the suture of the last whorl.

Species 66. (Mus. Hanley.)

PUPA PROCTERA. *Pap. testā parvā, cylindricā, fuscā, leviusculā; apice obtusā, anfractibus sex, subrotundis, mediis subaequalibus, ceteris levibus, ultimū rimatū; aperturā parvā, subquadratā, plicis decliviusculis, unā columellari, unā super anfractum ultimū profundā, ligulā.*

THE PROMINENT PUPA. Shell small, cylindrical, brown, rather smooth; apex obtuse, whorls six, rather rounded, the middle ones rather equal, straight-sided, the last notched; aperture small, rather square, tooth-like plaits, one columellar, one on the last whorl produced, double-pointed.

GOULD. Boiten, Jouru. IV. 3, p. 359.

Pupa rapinola von Pfe.

Pupa carinata, Gould.

Hel. Baltimore, U. S.

Species 67. (Mus. Hanley.)

PUPA CONTRACTA. *Pap. parvā, albā, pellucidā, brevī, pyramidalī; anfractibus quinque, gradatim crescentibus, rotundis, ultimū longē rimatū, aperturā subtriangulā, parvā, plicis, unā super anfractum ultimū prope suturem notatā, lamina, tribus intercalatis laminar.*

THE CONTRACTED PUPA. Shell small, white, pellucid, short, pyramidal; whorls five, gradually increased, rounded, the last with a long notch, aperture subtriangular, small plaits, one on the last whorl near the suture, very large, laminar, three internal, laminar.

GERMAN. Pfeiffer, Mon. Hel.

Hel. Vermont.

Species 68. (Mus. Hanley.)

PUPA MITCHELLI. *Pap. fuscā nigricantē, pyramidalī, tenuiusculā, apice obtusā; anfractibus sex, rotundis, gradatim crescentibus, obliquē tenuiter fatis, ultimū compresso-ventricosū, profundē rimatū; aperturā subtriangulā, adscendēti, plicis super anfractum ultimū unā conspicuā, duabus columellaribus, duabus inter marginem externum longulis.*

MITCHELLI'S PUPA. Shell blackish brown, pyramidal, rather thin, apex obtuse; whorls six, rounded, gradually increasing, obliquely finely ridged; the last compressed-ventricose, deeply notched; aperture subtriangular, raised, one conspicuous plait on the last whorl, two on the columella, three lengthened within the outer lip.

KÖSTER. Pfeiffer, Mon. Hel.

Pupa quinque-plicata) Mühlfeldt.

Pupa cheura)

Hel. Dalmatia.

Species 69. (Mus. Hanley.)

PUPA PHILIPPI. *Pap. testā parvā, fuscā, elongatā, cylindricā, versus apicem attenuatā, tenuiusculā, striatā; anfractibus quinque moleculā concentricā;*

aperturâ ovatâ, angustâ, pilicis varietalibus super anfractum ultimum dubius, plicâ palatiali infra medium ad labiâ externâ marginem externum extensa.

PHILIPPI'S PUPA. Shell small, brown, elongated, cylindrical, attenuated towards the apex, very finely striated; whorls five, moderately convex; aperture ovate, narrow, with two parietal plaits upon the body whorl, a palatal plait below the middle extended to the outer margin of the lip.

CANTERBURY. Pfeiffer, Mon. Hel. II. 350.

Pupa erigna (var.) Mousson.

Hab. Italy—Dalmatia—Isl. Corfu.

Species 70. (Mus. Hanley.)

PUPA AVENACEA. *Pup. testâ elatâ, fuscâ, attenuatâ, anfractibus sex, moderatè convexis; aperturâ ovatâ, callo suturali rudito, pilicis super ultimum anfractum unâ, ad columellam dubius, iatus marginem internum labii externi tribus lamelliformibus aperturam intrantibus.*

THE WHEAT PUPA. Shell raised, brown, attenuated; whorls six, moderately convex; aperture ovate, sutural callus strong, plates on the last whorl one, two on the columella, three within the inner margin of the outer lip, lamelliform, entering the mouth.

BEGONÈRE. Pfeiffer, Mon. Hel. II. 347.

Pupa avena, Draparnaud.

Pupa hordeum, Ferrussac.

Hab. Germany, Austria, Spain, France, &c.

Species 71. (Mus. — ? Copied.)

PUPA METABOLITA. *Pup. testâ breviusculâ, tenuiter costellatâ, pallidè fuscâ, cylindricâ, spirâ obtusâ, anfractibus sex, ultimo profunde rimato; aperturâ edentulâ, viz obliquâ, ovato-pyriformi; columellâ subobliquâ, labio externo viz reflexo.*

THE BLUNT-POINTED PUPA. Shell rather short, finely ribbed, pale fulvous, cylindrical, spire obtuse, whorls six, the last deeply notched; aperture without teeth, scarcely oblique, ovate-pyriform; columella rather oblique; outer lip scarcely reflected.

CROSS (Gonospira), Journal de Conchyliologie, 1874, p. 224. Pl. VIII, f. 5.

Gonospira Dupontiana. Crosse (olim).

Hab. Isl. Rodriguez.

Shorter and more ventricose than *P. modiolus*, with larger aperture and a slight obliquity.

Species 72. (Mus. — ? Copied.)

PUPA RODRIGUEZENSIS. *Pup. testâ profunde rimatâ; albâ, subcylindricâ, tenui, translucidâ, tenuiter striatâ, apice conico; anfractibus quinque, duobus ultimis cylindricis; aperturâ subquadratâ, edentulâ; labio externo tenui.*

THE RODRIGUEZ PUPA. Shell deeply notched, white, rather cylindrical, thin, translucent, finely striated; apex conical; whorls five, the two last cylindrical; aperture rather square, toothless, outer lip thin.

CROSSE. Journ. de Conch. 1874, p. 224, Pl. VIII. Fig. 4.

Hab. Isl. Rodriguez.

A likeness in miniature of the preceding, but much shorter and thinner, with the mouth straighter.

Species 73. (Mus. — ? Copied.)

PUPA CHLORIS. *Pup. testâ flavidâ, versus apicem rubescenti, brevi, cylindricâ; apice conico, obtuso; anfractibus quinque, densè costellatis; aperturâ obliquâ, subquadratâ, edentulâ.*

THE GOLDEN PUPA. Shell yellow, becoming red towards the apex, short, cylindrical; apex conical, obtuse; whorls five, closely ribbed; aperture oblique, rather square, without teeth.

CROSSE (Gonospira), Journ. de Conch. 1874, f. 7.

Hab. Isl. Rodriguez.

Shorter and more solidly ribbed than the two preceding, with the aperture more oblique.

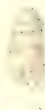
Species 74. (Mus. — ? Copied.)

PUPA SINUATA. *Pup. minutissimâ fulvo-cornâ, leri, brevi, ventricosâ; anfractibus quatuor, rotundis, apicalibus duobus rapide crescentibus, ultimis duobus inglatis, ultimo rimato; aperturâ subquadratâ, dentibus sex contractâ et sinuatâ.*

THE SINUATED PUPA. Shell very minutely fulvous-horn, smooth, short, ventricose; whorls four, rounded, the two apical quickly enlarged, the last two inflated, the last with a notch; aperture rather square, contracted and sinuated with six teeth.

MOUSSON (Vertigo), Crosse, Journ. de Conch. Pl. VIII. Fig. 10.

Hab. Araxis.



P U P A.

PLATE IX.

Species 75. (Mus. Hanley.)

PUPA EUCOMA. *Pap. testâ parvâ, albâ, clatâ, semi-pallidâ, brevî; anfractibus quinque, rotundis, ceteris apicem attenuatis, suturâ profundâ separatis, ultimo vix rimato; aperturâ subtriangulâ, platis quatuor, vix super anfractum ultimum, uno columellari, duobus laterâlis ad latum ceterorum terminantibus.*

THE STONE-DWELLING PUPA. Shell small, whitish, raised, semi-pellucid, smooth; whorls five, rounded, attenuated towards the apex, separated towards the apex; the last scarcely notched; aperture rather trigonal, plaits four, one on the body whorl, one columellar, two internal, terminating at the outer lip.

SAY. *Phil. Mon. Hel. II. 358.*

Pupa carinata, Gould.

Pupa ripida, Gould.

Hab. Florida, Baltimore, U.S.

Species 76. (Mus. Hanley.)

PUPA SIMPLEX. *Pap. testâ parvâ, brevissimâ, obtusâ, fissâ, apice obtusâ; anfractibus sex, tenuiter striatis; ultimo infra paulo contracto, profundâ rimato; aperturâ subtriangulâ, callosaturali magno, lamelliformi, arcuati, platis columellaribus duobus elongatis, et super anfractum ultimum interni, duobus palatilibus elongatis; labio externo super medium sinuatim incrassato.*

THE SIMPLE PUPA. Shell small, rather short, obtuse, brown, apex obtuse; whorls six, finely striated, a little contracted below, deeply notched; aperture rather trigonal, sutural callus large, lamelliform, arched, two columellar plaits elongated, one on last whorl internal; two palatal, elongated; outer lip sinuately thickened.

GOULD (*Vertigo*), *Phil. Mon. Hel. II. 392.*

Hab. Massachusetts.

Species 77. (Mus. Sowb.)

PUPA MISCORUM. *Pap. testâ parvâ, cylindricâ, brevî, levigatâ; apice obtusissimo, anfractibus 6, co-*

tundis, suturâ profundâ separatis, ad apicem rapidè crescentibus, ceteris subequalibus, ultimo breviter rimato; aperturâ paulo adscendenti, dentato-placatâ vel obtusâ, labio externo, ad marginem levi, post marginem incrassato, rotis albo.

THE FLY'S PUPA. Shell small, cylindrical, short, smooth; apex very obtuse, whorls 6, rounded, separated by a deep suture, rapidly increasing at the apex, others nearly equal, last shortly notched; aperture a little raised, with tooth-like plaits or without teeth; outer lip thin at the margin, thickened and white behind the margin outside.

USKELL.

Pupa marginata, Draparnaud.

Pupa undulata and *bidentata*, Phil.

Pupa Bachii, Adams.

Hab. Germany, Spain, Great Britain.

Species 78. (Mus. Sowb.)

PUPA CALLIFERA. *Pap. testâ brevî, pyramidalâ, obliquè costatâ, obtusâ; anfractibus quinque, tribus apicalibus rapidè crescentibus, ultimo profundè rimato; aperturâ oblongissimâ, infra rotundâ; suprà subquadratâ, callo suturali super anfractum ultimum conspicuo; marginem aperturæ subexpanso, rugoso.*

THE CALLUS-BEARING PUPA. Shell short, pyramidal, obliquely ribbed, obtuse; whorls five, three apical, rapidly increasing, last deeply notched; aperture rather oblong, rounded below, rather square above, with a conspicuous sutural callus upon the last whorl; margin of the aperture somewhat expanded, reflected.

MOORELL, *Rev. Conch. ii. 1860.*

Hab. Mauritius.

Species 79. (Mus. Sowb.)

PUPA YERSIPELLIS. *Pap. testâ oblongâ cylindricâ, albâ, obliquè costatâ; apice obtusissimo; anfractibus 6, tribus primis rotundis rapidè crescentibus, tribus ceteris subequalibus, convexiusculis, ultimo paulo*

*majori, profunde umbilico-rimato; aperturâ sub-
rotundâ, collo prope suturam inconspicuo; mar-
gine expanso, reflexo, fere integro.*

THE CHANGEABLE PUPA. Shell oblong, cylindrical,
white, obliquely costellated; apex very obtuse,
whorls six, three first rounded, rapidly increased,
the three others with a deeply notched umbi-
licus; aperture rather rounded, with an incon-
spicuous callus near the suture; margin ex-
panded, reflected, almost entire.

FERRUSSAC (Versipolis), Pfl. Mon. Hel. II. 319.

Hab. Isle of Bourbon.

Species 80. (Mus. Sowb.)

PUPA FACILIS. *Pap. testâ cylindrico-subpyramidalâ,
superâ rubrâ, infâ flavidâ; anfractibus sex, obli-
quis, tenuiter costatis, superioribus paulo atten-
uatis; ultimo brevi, profunde rimato; aperturâ
adscendenti obliquâ, margine reflexo, subexpanso,
collo suturali prope suturam calido.*

THE STAFF PUPA. Shell cylindrical-subpyramidal,
red above, yellowish below; whorls six, obli-
quely finely ribbed, the upper a little atten-
uated, the last short, deeply notched; aperture
raised, oblique, margin reflected, slightly ex-
panded, sutural callus near the suture strong.

PEIFFER. Mon. Hel. IV. 661.

Hab. Mauritius.

Species 81. (Mus. Sowb.)

PUPA LYONETII. *Pap. testâ latè pyramidalâ, flavidâ,
costellatâ; apice obtuso, anfractibus superioribus
quinque gradatim crescentibus, rectiusculis; ultimo
lateraliter expanso, latere sinistro gibboso, infâ
rimâ elongatâ duplicatâ; aperturâ obliquè aurifor-
mâ, calicè adscendenti, margine incrassato reflexo.*

LYONET'S PUPA. Shell broadly pyramidal, yellow-
ish, ribbed; apex obtuse, five upper whorls
gradually increasing, rather straight, the last
laterally expanded, gibbous at the left side,
doubled below, with a long slit; aperture obli-
quely auriform, much raised; margin thickened,
reflected.

MOXHOUT (Lyonetii).

Gibbus Lyonetianus, Pfeiffer.

Hab. Isl. Bourbon.

This species sometimes occurs reversed.

Species 82. (Mus. Sowb.)

PUPA CLAVATULA. *Pap. testâ tenui, costatâ, cylindricâ,
suprà mediâ inflatâ; anfractibus 10, costellatis,
versus apicem latissimis infâ contractis, ultimo
rimato; aperturâ parvâ subquadratâ, adscen-
denti, collo suturali magno.*

THE CLUB PUPA. Shell thin, ribbed, cylindrical, in-
flated above the middle; whorls ten, ribbed, very
broad towards the apex, contracted below, the
last notched; aperture small, rather square,
ascending, sutural callus large.

LAMARCK. Anim. S. Vert.

Hab. Isl. Bourbon.

Species 83. (Mus. Sowb.)

PUPA HOLOSTOMA. *Pap. testâ tenui, costatâ, albâ, cy-
lindricâ, suprà mediâ paulo inflatâ; anfrac-
tibus numerosis, inferioribus subattenuatis; ultimo
angustâ, rimato; aperturâ parvâ, subquadratâ,
collo suturali maximo.*

THE MIRE-MOURED PUPA. Shell thin, ribbed, white,
cylindrical, a little inflated above the middle;
whorls numerous, the lower ones partly atten-
uated; the last narrow, notched; aperture small,
subquadrate, sutural callus very large.

MOELET. Ser. Conch. II. 1860.

Hab. Mauritius.

Narrower than the preceding, and with the upper
whorls less inflated.

Species 84. (Mus. Sowb.)

PUPA DUSSEMERI. *Pap. testâ ventricosâ, albâ, epi-
dermide cornâ subcirrâ; anfractibus 6, sub-
depressis, ultimo magno infâ attenuato, profunde
rimato; aperturâ ovato, pyriformi; margini
reflexo.*

DUSSEMER'S PUPA. Shell ventricose, white, with a
greenish horny epidermis; whorls six, rather
depressed, the last large, attenuated below,
deeply notched; aperture ovate, pyriform; mar-
gin reflected.

REEVE (Balinus), Conch. Icon. Vol. V.

Hab. Mauritius.



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P U P A.

PLATE X.

Species 85. (Mus. —? Copied.)

PUPA FABRIANA. Pup. testis minutis, fusco-cornatis, sinistris, oblongo-ovatis; spiris obtusis; anfractibus 5, convexis, regulariter crescentibus; ultimo circumato, ceteros aperturam valde contracto; apertura auriformi, fere verticali, platis tribus, non columnaribus, non parietali, non inter marginem labii externi producti, labii exterioris ad medium contracto.

FABRE'S PUPA. Shell minute, horn-brown, sinistral, oblong-ovate, spire obtuse; whorls five, convex, regularly increased, the last scarcely notched, strongly contracted towards the aperture, aperture auriform, almost vertical, plaits three, one columnar, one parietal, one produced within the margin of the outer lip; outer lip contracted.

CROSSE, Journ. de Conch. Vol. XX, p. 359, 1872.
Hab. New Caledonia.

Species 86. (Mus. Hanley.)

PUPA SAULCEYI. Pup. testis sinistris, brevi, pallide fuscis, orato-ventricosus; spiris obtusis conicis, medio subinflatis; ultimo anfractu infra oblique circumato, dorso ante aperturam contracto; apertura sub-orati, margine albo, latè reflexo, labio simpliciter, platis acutis, medio appressantibus; callo suturali valido, elongato.

SAULCEY'S PUPA. Shell sinistral, smooth, pale, fulvous, ovate-ventricose; spire obtusely conical, slightly inflated in the middle; last whorl obliquely notched, the back contracted before the aperture; aperture subovate, margin white, broadly reflected, with six plaits within, acute, approaching in the middle; sutural callus strong, elongated.

BOUGAINVILLE. Pfl. Mon. IV, p. 684.
Hab. Southern Europe.

Species 87. (Mus. Hanley.)

PUPA SCARUS. Pup. testis sinistris, elongato-cylindricis, solibus, pallidis, spiris superius conicis, medio cylindricis, anfractibus 8, 9, superioribus rotundis,

apicis crescentibus, medianis subequalibus, ultimo circumato; apertura parva, subovata, lobio interius supra medium multiplicato.

THE STALK PUPA. Shell sinistral, elongated, cylindrical, solid, pale, whorls 8 or 9, the upper ones rounded, rapidly increased, the middle ones rather equal, the last with a very slight notch; aperture small, rather ovate, inner lip with a single plait above the middle.

PARRY'S. Pfeiffer (Chondrula), Mon. VI.
Pupa Raynaldi, Bourgainville.
Belanus bicollatus? Triv.
Hab. Asia Minor.

Species 88. (Mus. —? Copied.)

PUPA PATTENSIS. Pup. testis minutis, sinistris, sub-circis-fuscis, brevi, tenui, breviter cylindricis; anfractibus quatuor globulosis crescentibus, spiris obtusis; apertura subovata, columella reflexa, labio interius multiplicato.

PATTAN PUPA. Shell minute, sinistral, greenish-brown, short, thin, shortly cylindrical; whorls 4, gradually increased, last deeply notched, spire obtuse, aperture subovate, columella reflected, inner lip single-plaited.

CROSSE, Journ. de Conch. 1874, p. 391., Pl. 12.
Fig. 5.
Hab. Paiti, Pern.

Species 89. (Mus. Sievers.)

PUPA SIGMATA. Pup. testis parvis, albis, perforatis, cylindricis, levigatis, supra medianis inflatis, infra subattenuatis; apice obtuso; anfractibus septem, medianis rectiusculis, ultimo ad basin obscure cristato, impressione signata, apertura parva, margine crasso, rotundo, labio interius horizontali, medio acute multiplicato.

THE MARKED PUPA. Shell small, white, perforated, cylindrical, smooth, inflated above the middle, rather attenuated below, whorls 7, middle ones rather straight, the last very obscurely crested and marked with an impression; aperture small, margin thick, inner lip horizontal, with a sharp tooth in the middle.

MOUSSON. Journ. de Conch. 1873, p. 211. Pl. VIII.

Fig. 7.

Hab. Araxis.

Species 90. (Mus. Sievers.)

PUPA BIFILARIS. *Pup. testâ parvâ, fuscâ, cylindricâ, levigatâ, apice obtuso; anfractibus septem, medianis reclinatis, ultimo arcuâ rimato; aperturâ latâ, margine latè reflexo, columellâ latâ, bifidâ, labio interno prope medianâ uniplicatâ.*

THE DOUBLE-THREADED PUPA. Shell small, brown, cylindrical, smooth, apex obtuse; whorls 7, middle rather straight, the last with a curved notch; aperture broad, with broadly reflected margin, columella broad, two-threaded, inner lip with a single plait near the middle.

MOUSSON. Journ. de Conch. 1873, p. 210. Pl. VIII.

Fig. 8.

Hab. Gorkischa.

Species 91. (Mus. Crosse.)

PUPA DESMAZURESII. *Pup. testâ parvâ, fulcâ, breviter, cylindricâ; apice obtusissimâ; anfractibus septem, convexiusculis; ultimo profundè rimato, aperturâ subanfractiformi, internè uniplicatâ; labio interno acutè uniplicato, columellâ acutè uniplicatâ; labio externo levî.*

DESMAZURES'S PUPA. Shell small, fulvous, shortly cylindrical, apex very obtuse; whorls seven, rather convex; the last deeply notched; aperture rather anfractiform, with one interior plait, inner lip with one sharp plait, columella with one sharp plait; outer lip thin.

CROSSE. Journ. de Conch. 1874, p. 227, Pl. VIII. f. 3.

Hab. Isl. Rodriguez.

Species 92. (Mus. Hanley.)

PUPA POLYDON. *Pup. testâ fulcâ, cylindrico-fusiformi, leviter levatâ, altâ, angustâ, anfractibus novem, convexiusculis, medianis subæqualibus, suturâ profundè separatis; ultimo profundè rimato; aperturâ parvâ, ovatâ, plicis numerosis intrautibus inæqualibus contractâ.*

THE MANY-TOOTHED PUPA. Shell fulvous, cylindrically fusiform, finely ridged, raised, narrow, whorls nine, rather convex, the middle ones nearly equal, separated by a deep suture; the

last deeply notched; aperture small, oval, contracted by numerous entering unequal plaits.

DESMAZURES. Moll. Ter. et Fluv.

Pupa ringicula, Michaud.

Hab. Southern Europe.

Species 93. (Mus. Hanley.)

PUPA NUCIFERA. *Pup. testâ subovatâ, pallidè fulcâ, brevi, leviter striatâ; apice obtuso; anfractibus quinque, superioribus quatuor, brevibus, rapidè crescentibus, convexis, ultimo alto, rectiusculo, latè et profundè rimato; aperturâ ad suturam elevatâ, callosâ, plicis tribus magnis et duobus minoribus contractâ, margine prope suturam sinuato.*

THE NUTCRACKER PUPA. Shell rather oval, pale fulvous, short, finely striated; apex obtuse; whorls five, the four upper ones short, rapidly increasing, convex, the last elevated, rather straight, with a broad and deep notch; aperture raised at the suture, with a small sutural callus, contracted by three large and three smaller plaits, and a sinus near the suture.

PARREY'S. Pflr. Mon. Hel. Bulimus (Chondrula), Vol.

VI. p. 22.

Hab. Isl. Cyprus.

Species 94. (Mus. — ? Copied)

PUPA LIENAEIANA. *Pup. testâ parvâ, fusco-cornutâ, elatâ, subcylindricâ, levigatâ; anfractibus duobus, parvis apicalibus, tum tribus, altis inflato-cylindricis; ultimo profundè rimato; aperturâ obliquè oblongo-subquadratâ; dentibus unâ parietali, unâ columellari, proboctis acutis duobus marginalibus infra medianâ labii externâ localis.*

LIENAE'S PUPA. Shell small, horny brown, elevated, subcylindrical, smooth; whorls two, small apical, then three elevated, inflated, cylindrical; the last with a deep notch; aperture oblique, oblong-subquadrate, with one parietal and one columellar tooth, produced, sharp, two marginal, placed below the middle of the outer lip.

CROSSE. Journ. de Conch. 1874, p. 228, Pl. VIII. f. 4.

Hab. Coral Point, Isl. Rodriguez.

This is said to bear some resemblance to a little shell named *carygium mauritanum* by Mr. H. Adams.



P U P A.

PLATE XL.

Species 95. (Mus. — ?)

PUPA CASTIA. *Pup. testâ minuti, fuscâ, brevi, breviter cylindricâ, apice obtusissimo; anfractibus 5, convexiusculis, ultimo arcuatim rimato; aperturâ majusculâ, subquadratâ, plicâ parietali acutâ, margine externo tenui, columellâ obliquâ.*

THE CASPIAN PUPA. Shell minute, brown, smooth, shortly cylindrical, apex very obtuse; whorls five, rather convex, the last with an arched notch; aperture rather large, rather square, parietal plait sharp, outer margin thin, columella oblique.

PERITHE. Malak. Bl. 1871. Vol. XVIII.

Hab. Lenkorai, Transcaucasia.

Species 96. (Mus. — ?)

PUPA LONGUEIRO. *Pup. testâ minuti, fuscâ, breviter, elongatâ, angustâ, subcylindrico-pyramidatâ; apice obtuso; anfractibus quinque, convexiusculis, ultimo cylindraceo, elongatâ, arcuatim rimato; aperturâ subquadratâ, margine lutescenti, expanso, reflexo; plicâ parietali et columellari prominentibus, acutis, plicâ internis tribus.*

THE TOLE PUPA. Shell minute, brown, smooth, elongated, narrow; whorls five, rather convex, last cylindrical-pyramidal; apex obtuse; whorls five, rather convex, the last cylindrical, elongated, with a curved slit; aperture rather tending to square, margin yellowish, expanded, reflected; a prominent sharp parietal, and a columellar plait; internal plaits three.

CROSSE. Journ. de Conch. 1873. Pl. I. f. 2.

Hab. Curaçao, Antilles.

Species 97. (Mus. Hanley.)

PUPA AMONKS. *Pup. testâ angustâ, purpureo-fuscâ, subfusiformi; anfractibus 8, gradatim crescentibus; ultimo profunde rimato; aperturâ parvâ, fuscâ, elevatâ, angustâ ovali, intâs plicatâ, callo suturali albo, conspicuo, plicâ parietali intravâ, columellâ latâ, elevatâ, multiplicatâ, labio externo crassiusculâ.*

THE ARGO PUPA. Shell narrow, purple-brown, subfusiform; whorls 8, gradually increased, the last deeply notched; aperture small, fulvous, raised, narrowly ovate, with two interior plaits, sutural callus white, conspicuous, parietal plate entering, columella broad, raised, single-plaited; outer lip rather thick.

ROSSMÄSLER. Leon. III. 17, p. 105, t. 85, f. 936.

Pupa coracichilos, Albers.

Hab. Valentin.

Species 98. (Mus. Hanley.)

PUPA PAGODELA. *Pup. testâ fulvo-cornâ, inflato-cylindricâ, brevi, obliquè limatâ; apice obtuso; anfractibus septem, depressis, convexis, medianis inflatis, ultimo profunde et longe rimato, infra medium contracto; aperturâ ad suturam anfractibus ultimi elevatâ, prope suturam sinuatâ, columellâ prope medium callosâ, labio externo supra medium tumidâ.*

THE LITTLE PAGODA PUPA. Shell horny-fulvous, inflated-cylindrical, short, obliquely ridged; apex obtuse; whorls seven, depressed, convex; the middle ones inflated, the last with a deep and lengthened slit, contracted below the middle; aperture raised to the suture of the last whorl, sinuated near the suture, columella callous near the middle, outer lip tumid above the middle.

DESMAREST. Plt. Mon. Hel. II. 310.

Hab. South Europe.

Species 99. (Mus. Hanley.)

PUPA VILLE. *Pup. testâ cylindricâ, fuscâ, pedatâ, apice obtusissimo, anfractibus ad apicem rapidè crescentibus, tum tumidis, medianis rectiusculis, allis, ultimo profunde et latè rimato; aperturâ angustâ, paulim elevatâ, obliquâ, margine angustâ, labio externo supra medium sinuato; labio interno prope suturam callo pliciformi munito, columellâ obliquâ, elevatâ.*

VILLA'S PUPA. Shell cylindrical, brown, polished, apex very obtuse, whorls rapidly increased at the

apex, then tumid, middle ones rather straight, elevated, the last deeply and broadly notched; aperture narrow, a little raised, oblique, margin narrow, outer lip sinuated above the middle, inner lip provided with a plait-like callus near the suture, columella oblique, toothless.

CHARPENTIER. Pfeiffer. Mon. Hel. II. 339.

Hab. Spain.

Species 100. (Mus. Hanley.)

PUPA STRANGEI. *Pup. testâ sinistrali, cylindricâ, tenui, semipellucidâ, cornâ, anfractibus 4, apicali rotundo, duobus medianis convexisculis, ultimo altiusculo, infâ profundè rimatâ; aperturâ subtrigonâ, margine albo, reflexo; labio interno plicis dentiformibus duobus infra medium armato, columellâ plicâ prominenti et alterâ parvâ, et labio interno plicâ parietali duplicatâ munitis.*

STRANGE'S PUPA. Shell sinistral, cylindrical, thin, semipellucid, horny, whorls 4, the apical one rounded, the two middle ones rather convex, the last rather raised, deeply notched below; aperture subtriangular, margin white, reflected; inner lip armed with two tooth-like plaits, columella provided with a prominent plait and another small one, and the inner lip with a doubled parietal plait.

PFEIFFER. Mon. VI. 336.

Hab. Port Jackson.

Species 101. (Mus. Hanley.)

PUPA CONICA. *Pup. testâ fuscâ, subpyramidalâ, filoso-striatâ; apice acutiusculo; anfractibus novem, depressis, versum apicem attenuatis, ultimo lato, profundè et longè rimatâ; aperturâ versum suturam ultimi anfractis elevatâ, columellâ perobliquâ, intus spiritaliter bicipitatâ, labio externo intus infra medium multiplicatâ.*

THE CONICAL PUPA. Shell brown, rather pyramidal, with thread-like striae; apex rather acute; whorls nine, depressed, the last broad with a deep and long slit; aperture raised towards the suture of the last whorl, columella very oblique, with two spiral plaits, outer lip with a plait inside, below the middle.

ROSSMÄSLER. Pfeiffer. Mon. Hel. II. 325.

Hab. Styria.

Species 102. (Mus. Hanley.)

PUPA DOLIOLUM. *Pup. testâ cylindricâ, fuscâ, tenuiter liratâ, prope apicem tumidâ, infâ subattenuatâ; anfractibus septem; convexisculis, ultimo arcuatim rimatâ; aperturâ latâ, albâ; labio externo prope suturam sinuato, labio interno plicâ parietali munito.*

THE LITTLE TEN PUPA. Shell cylindrical, brown, finely ridged, tumid near the apex, a little attenuated below; whorls seven; rather convex, the last with a curved notch; aperture broad, white; outer lip sinuated near the suture, inner lip provided with a parietal plait.

BROUËRE. Lank. Anim. sans Vert.

Helix coronata, Stüder.

Helix spinosa, Ferrussac.

Helix critica, Zettlins.

Helix rillensis, Kokiel.

Hab. South Europe.

Species 103. (Mus. Hanley.)

PUPA RUPESTRIS. *Pup. testâ pyramidalâ, fusco-purpureâ; apice acuminato; anfractibus quinque, convexis, rapidè crescentibus, obliquè tenuiter liratâ, ultimo majusculo, rimatâ; aperturâ parvâ, margine feri continuo, plicis nullis.*

THE ROCK PUPA. Shell pyramidal, purple-brown; apex acuminate; whorls five, convex, rapidly increased, obliquely, finely ridged; the last rather large, notched; aperture small, margin almost continuous, without plaits.

PHILIPPI. Pfeiffer II. 314.

Hab. Sicily.

Species 104. (Mus. Hanley.)

PUPA LINCOLNENSIS. *Pup. testâ sinistrali, albâ vel fuscâ, tenuiter striatâ, breviter cylindricâ, apice obtuso, ultimo anfractu infâ breviter rimatâ; aperturâ parvâ, margine reflexo, labio interno asplacato.*

THE PORT LINCOLN PUPA. Shell sinistral, white or brown, finely striated, shortly cylindrical, apex obtuse, last whorl with a short notch below; aperture small, margin reflected, inner lip with one fold.

Cox. Proc. Geol. Soc. 1867.

Hab. Port Lincoln, S. Australia.



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PUPA.

PLATE XII.

Species 105. (Mus. Lewis.)

PUPA GOULDII. *Pup. testā minutā, fusco-cornuā, breviter, breviter subcylindrica; asfractibus quatuor, tribus inflatis, rotundis, ultimo latē rimato; apertura subauriformi, plicis internis lamelliformibus tribus, plicā parietali labii interni acule productā; plicis columellaribus duabus.*

GOULD'S PUPA. Shell minute, horny-brown, smooth, shortly sub-cylindrical; whorls four, three inflated, rounded, the last broadly notched; aperture rather auriform, with three interior lamelliform plaits, parietal plait of the inner lip sharply produced; columellar plaits two.

BINNEY. Pfeiffer. Mon. Hel. II. 358.

Hab. Arctic America.

Species 106. (Mus. Hanley.)

PUPA CORTICARIA. *Pup. testā parvā, albā, pellucidā, in partibus cortice subgratosa obductā, breviter cylindricā, apice obtusā; asfractibus quatuor rotundis, ultimo rimato; apertura auriformi; labio interno plicā magnā et allicā parvā munito, plicā columellari parvā.*

THE RIND-COVERED PUPA. Shell small, white, pellucid, covered in parts by a slightly granular crust or rind, shortly cylindrical, apex obtuse; whorls four, rounded, the last notched; aperture auriform, inner lip provided with a large plait and a small one, columellar plait small.

SAY. Pfeiffer. Mon. Hel. II. 328.

Hab. Pennsylvania.

Species 107. (Mus. Hanley.)

PUPA ALPICOLO. *Pup. testā fuscā, cylindricā, breviter, breviter subcylindricā, apice obtusā, asfractibus septem, compressiusculis, ultimo infra contracto, horizontaliter rimato; apertura subquadratā, margine intus paulo incrassato, plicis nullis.*

THE ALPINE PUPA. Shell brown, cylindrical, rather short, smooth, apex obtuse, whorls seven, rather convex, the last contracted below, with an horizontal notch; aperture rather square, margin a little thickened within, no plaits.

CHARPENTIER. Pfeiffer. Mon. Hel. II. 305.

Hab. Spain.

Species 108. (Mus. Hanley.)

PUPA ASCONOSTOMA. *Pup. testā subcylindricā, fuscā, cylindricā, asfractibus sex brevibus, vir conccis, ultimo rimato, subumbilicato; apertura subtrigona, infra subacuminatā, superā prope suturam angulatā, margine infra angulā tumidiusculā.*

THE ANGLE-MOUTHED PUPA. Shell greenish-brown, cylindrical, whorls six, short, very slightly convex, the last notched, rather umbilicated; aperture rather trigonal, slightly acuminate below, angular above near the suture, margin a little swelled below the angle.

LOWE. Pfeiffer II. 314.

Pupa umbilicata var. De Paiva.

Pupa Enalensis, Lowe.

Hab. Madeira.

Species 109. (Mus. Hanley.)

PUPA CHARPENTIERI. *Pup. testā parvā, breviter, breviter subcylindricā, apice obtusā, asfractibus quatuor, tribus rotundis, rapidē crescentibus, ultimo magnā, infra paulo contracto, profundē rimato; apertura subtrigona, labio externo prope suturam sinuato, medio et infra intus incrassato; plicis dentiformibus, parietali unā, columellari duabus magnis et unā parvā, labii externi duabus.*

CHARPENTIER'S PUPA. Shell small, short, inflated, brown, semipellucid, whorls four, three round, rapidly increasing, the last large; a little contracted below, with a deep notch; aperture sub-

trigonal, outer lip sinuated near the suture, thickened at and below the middle, tooth-like plaits, one parietal, columellæ two large and one small, and two on the outer lip.

SHUTTLEWORTH. Pfeiffer. Mon. III. p. 555.

Pupa Madrasiana, Dupuy.

Pupa (vertigo) ventrosa, Heynem.

Hab. Spain, France, Germany.

Species 110. (Mus. Hanley.)

PUPA PELLUCIDA. *Pup. testâ elatâ, subpyramidatâ, fuscâ, brevi, semipellucidâ, anfractibus sex, inflatis, ultimo breviter rimatâ; aperturâ parvâ, plicis dentiformibus tribus ad quinque, plicâ ultimi anfractis nonnisi quâdam ad terminum duplicatâ.*

THE PELLUCID PUPA. Shell raised, rather pyramidal, brown, smooth, semipellucid, whorls six, inflated, the last with a short notch; aperture small, tooth-like plaits three to five, the plait of the body whorl sometimes doubled at the end.

PFIFFER. Mon. Hel. II. 360.

Pupa scirelis, Gould.

Pupa Rüsci, Adams.

Hab. Cuba, Jamaica, St. Thomas, Porto Rico.

Species 111. (Mus. Hanley.)

PUPA PACHYGASTRA. *Pup. testâ elatâ, cornuâ, tenuiter limatâ, subfusiformi, vixens apicem acuminatâ, medio cylindricâ; anfractibus decem rectiusculis, ultimo infâ acuminatâ, longè et obliquè rimatâ, aperturâ oratâ, adscendenti, margine albo, reflexo, subexpanso, callo suturali laminatim continuo, plicis ultimi anfractis unâ et columellâ quatuor, lamelliformibus, labii externi quatuor, laminiformibus, intus continuis.*

THE THICKENED PUPA. Shell raised, horny, finely ridged, rather fusiform, acuminated towards the apex, cylindrical in the middle; whorls ten, rather straight; the last acuminated below, with a long oblique notch, aperture ovate, raised, margin white, reflected, rather expanded, sutural callus continued in layers, plaits of the last whorl one, and of the columella four, lamelliform, of the outer lip four, laminiform, continued within.

ZENGLER. Pfeiffer. Mon. Hel. II. 337.

Pupa oblongata, Rossmäslcr.

Pupa truncatula var? Adams.

Hab. Dalmatia.

Species 112. (Mus. Hanley.)

PUPA VARIABILIS. *Pup. testâ elatâ, cornuâ, tenuiter limatâ, versus apicem acuminatâ, medio inflatâ, anfractibus decem, convexiusculis, ultimo infâ acuminatâ, longè et obliquè rimatâ; aperturâ oratâ, labii, adscendenti, margine albo, reflexo, expanso; callo suturali intus continuo, plicis laminiformibus intus continuis, convergentibus.*

THE VARIABLE PUPA. Shell raised, horny, finely ridged, acuminated towards the apex, inflated in the middle, whorls ten, rather convex, the last acuminated below, with a long, oblique notch, aperture ovate, broad, raised, margin white, reflected, expanded; sutural callus continued within, lamelliform plaits continued within, converging.

DEAFARNAUD. Pfeiffer. Mon. Hel. II. 349.

Helix mutabilis, FETTERSC.

Pupa multidentata, Oliv.

Hab. France, Switzerland, Spain.

Species 113. (Mus. Hanley.)

PUPA LUSITANICA. *Pup. testâ subpyramidatâ, purpureo-fuscâ, versus apicem attenuatâ, obliquè limatâ, medio paulo inflatâ; anfractibus septem, convexis, ultimo uniusculo, obliquè breviter rimatâ; aperturâ pallidè fulcâ, labio externo paulo elevato, leviter reflexo; columellâ profundâ duplicatâ, plicis internis tribus longatis.*

THE LUSITANIAN PUPA. Shell rather pyramidal, purple-brown, attenuated towards the apex; obliquely ridged, a little inflated in the middle; whorls seven, convex, the last rather large, with a short oblique notch; aperture pale fawn, outer lip a little raised, slightly reflected; columella deep, two-plaited, three internal elongated plaits.

ROSSMÄSLER. Mon. Hel. II. 347.

Hab. Lusitania.

Species 114. (Mus. Hanley.)

PUPA MODESTA. *Pup. testâ minutâ, fuscâ, brevi, inflatâ, semipellucidâ, anfractibus quatuor, rotundis; ultimo mobilicito; aperturâ parvâ, brevi, plicis dentiformibus acutis planis contracto.*

THE MODEST PUPA. Shell minute, brown, short, inflated, semipellucid; whorls four, rounded, the last umbilicated; aperture small, short, contracted by several sharp tooth-like plaits.

A. ADAMS. Proc. Zool. Soc.

Hab. Mauritius.



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PLATE XIII.

Species 115. (Mus. Hanley.)

PUPA RHOMA. *Pup. testâ angustâ, altâ, pyramidalâ, fuscâ, tenuissimè liriâ; apice obtuso; anfractibus sex, superioribus quatuor attenuatis, subrotundis, penultimo ventricoso, ultimo umbilicato; aperturâ parvâ, angustâ, anticè acuminatâ, intus dentibus prominentibus quinque contractâ.*

THE RHODE PUPA. Shell narrow, high, pyramidal, brown, very finely ridged; apex obtuse; whorls six, upper four attenuated, rather rounded, last but one ventricose, last umbilicated; aperture small, narrow, anteriorly acuminate, contracted within by five prominent teeth.

ROTHWELL. Pfeiffer, Monograph V. p. 318.

Pupa acutula. Parreys.

Hab. Rhode, Dalmatia.

Species 116. (Mus. Hanley.)

PUPA EVULA. *Pup. testâ clavatâ, albâ, costellis rectis rotundis sculptâ; apice obtuso; anfractibus superioribus ventricosis, duobus ultimis subcylindricis, paulo contractis, ultimo longè rimato; aperturâ rectâ, posticè subquadratâ, anticè productâ, rotundâ, prope suturam plicâ parietali unitâ.*

THE EVULE PUPA. Shell club-shaped, whitish, sculptured with rounded, straight little ribs; apex obtuse; upper whorls ventricose, two last rather cylindrical, a little contracted, last with a long notch; aperture straight, posteriorly rather square, anteriorly produced, rounded, provided with a parietal plait.

DESHAYES. Conchologie de l'île de la Réunion.

Hab. Isl. Bourbon.

Species 117. (Mus. Hanley.)

PUPA OVULARIS. *Pup. testâ ovatâ, brevî, ventricosâ, brevî, fusco-cornuâ; apice obtuso; anfractibus quatuor, tribus superioribus brevibus, ultimo magno,*

breviter rimato; aperturâ albiâ, semiovatâ, intus dentibus quinque prominentibus contractâ, margine subexpansâ.

THE EGG-SHAPED PUPA. Shell ovate, short, ventricose, smooth, brownish-horny; apex obtuse; whorls four, three upper short, last large, with a short notch; aperture white, semiovate, contracted within by five prominent teeth, margin rather expanded.

OLIVIER. Pfeiffer (Balinus), Mon. 1868, p. 7.

Hab. Syria.

Species 118. (Fig. a, b. Mus. Hanley.)

PUPA SEPTEMENTATA. *Pup. testâ oblongo-ovatâ, fusco-purpureâ vel albâ, brevî, altâ, apice obtusiusculo; anfractibus sex, tribus superioribus brevibus, penultimo ventricoso, ultimo longè et arcuatim rimato; aperturâ ovatâ, albâ, dentibus septem lamelliformibus intus valdè contractâ, margine latè expanso, ad dorsum contracto.*

THE SEVEN-TOOTHED PUPA. Shell oblong-ovate, purple-brown or white, smooth, high; apex rather obtuse; whorls six, three upper rather short, last ventricose, with a long curved notch; aperture ovate, white, strongly contracted within by seven lamelliform teeth, margin broadly expanded, contracted at the back.

ROTHWELL. Pfeiffer (Balinus), Mon. 1868, p. 70.

Hab. Syria.

Species 119. (Mus. Hanley.)

PUPA PRODUCTA. *Pup. testâ altissimâ, cylindricâ, albâ, densè liriâ; anfractibus septem, tribus superioribus brevibus, rotundis, tribus medianis rectis, ad suturam compressis, ultimo minute umbilicato; aperturâ majusculâ, prope suturam unidentatâ, margine subincrassatâ, lateraliter paulo productâ.*

THE PRODUCED PUPA. Shell very tall, cylindrical, white, closely ridged; whorls seven, three upper

short, rounded, three middle straight, compressed at the suture, last with a small umbilicus; aperture rather large, with a tooth near the suture, margin rather thickened, a little produced laterally.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 120. (Mus. Hanley.)

PUPA FAMPHORODON. *Pup. testā sinistrali, fuscă, ovato-oblongā, subcentricā, tenuiter obliquē lirata; apice obtuso; anfractibus novem, brevissimis, ultimo longē et latē rimato, ad dorsum aperturā contracti; aperturā albā, obliquē productā, intūs angustissimā dentibus laminatis prominentibus contractā, margine lato, tenui, producto.*

THE BEAK-TOOTHED PUPA. Shell sinistral, brown, ovate-oblong, rather ventricose, finely obliquely ridged; apex obtuse; whorls nine, very short, last with a long and broad notch, contracted at the back of the aperture; aperture white, obliquely produced, contracted within very narrowly by laminated prominent teeth, margin broad, thin, produced.

BENSON. Ann. and Mag. Nat. Hist. 3rd series, June 1864.

Hab. Near Simon's-Town, Cape of Good Hope.

Species 121. (Mus. Hanley.)

PUPA CALATHISCUS. *Pup. testā parvā, fuscă, brevi, ventricosā, costis validis, distantibus, prominentibus, rotundis liratis, medio anfractu fuscā nudi fasciatā; apice obtuso; anfractibus septem, apicalibus parvis, levigatis, medianis tumidis, latis, ultimo medio infraque contracto, breviter rimato; aperturā brevi, plicā suturali magnā, columellari parvā, labio externo intūs triplicato.*

THE LITTLE-BACKED PUPA. Shell small, brown, short, ventricose, ridged with strong, distant, prominent, rounded ribs, with a brown band in the

middle of the whorls; apex obtuse; whorls seven, apical, small, smooth, middle tumid, broad, last contracted in the middle and under, with a short notch; aperture short, sutural plait large.

LOWE. Pfeiffer, Mon. 1868.

Hab. Porto Santo, Madeira.

Species 122. (Mus. Hanley.)

PUPA CYLINDRELLUS. *Pup. testā albā, tenui, semipellucidā, levigatā, clacatā; apice obtuso; anfractibus octo, superioribus brevissimis, rapidē crescentibus, medianis et inferioribus gradatim attenuatis, altiusculis, convexiusculis, ultimo profundē rimato, infra contracto; aperturā subovatā, plicā suturali costatā.*

THE LITTLE-CYLINDER PUPA. Shell white, thin, semipellucid, smooth, club-shaped; apex obtuse; whorls eight, upper very short, rapidly increasing, middle and lower gradually attenuated, rather high, rather convex, last deeply notched, contracted below; aperture rather oval, with large sutural plait.

A. ADAMS. Proc. Zool. Soc.

Hab. Isl. Bourbon.

Species 123. (Mus. Hanley.)

PUPA STRIATICOSTATA. *Pup. testā albā, solidiusculā, subpyramidalit, densē obliquē costellatā, costellis elevatis, levibus, incisīs; ultimo anfractu umbilicato et breviter rimato; aperturā majusculā, subquadratā, edentatā; columellā intūs medio tumidiusculā.*

THE STRIA-RIBBED PUPA. Shell white, rather solid, subpyramidal, closely obliquely ribbed, ribs raised, smooth, incised; last whorl umbilicated and shortly notched; aperture rather large, rather square, toothless; columella rather tumid within at the middle.

MOORE. Rev. et Mag. Zool. XVIII., 1866.

Hab. Mauritius.



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P U P A.

PLATE XIV.

Species 124. (Mus. Hanley.)

PUPA ROSSMASLERI. *Pap. brevis, ventricosa, conica, pallide cornea, tenuiter oblique costellata; anfractibus sex, brevibus, rapide latitudine crescentibus, ultimo longe rimato; apertura parva, ad medium ultimi anfractus elevata, idus marginem septendecimatis.*

ROSSMASLER'S PUPA. Shell short, ventricose, conical, pale horny, finely obliquely ribbed; whorls six, short, rapidly widening, last with a long notch; aperture small, raised to the middle of the last whorl, with seven teeth within the margin.

SCHMIDT. Pfeiffer, Monog. 1868, p. 323.

Hab. Illyria.

Species 125. (Mus. Hanley.)

PUPA STENOPHYLLIS. *Pap. testâ parvâ, albâ, semipellucidâ, costatâ, papiformi, brevî; anfractibus sex, apicalibus duobus parvis, laevigatis, medianis ventricosis, inferioribus gradatim attenuatis, ultimo infra angulato, longè rimato; apertura parvâ, angulatâ, prope suturam ultimi anfractus elevata, labio externo supra medium cordè sinuato, undulato, plicâ suturali maximâ, descendenti.*

THE NARROW-LEAFED PUPA. Shell small, white, semipellucid, ribbed, chrysalis-shaped, short; whorls six, two apical small, smooth, middle ventricose, lower gradually attenuated, last narrow below, with a long notch; aperture small, narrow, raised to near the suture of the last whorl, outer lip with a strong bend above the middle, with one tooth, sutural plicæ very large, descending.

BESSON. Fid. Hanley.

Hab. Khasi.

Species 126. (Mus. Hanley.)

PUPA NOVÆZELANDICA. *Pap. testâ cylindricâ, fuscâ rubrâ costatâ; anfractibus sex, apicalibus subcomplanatis,*

lis, ultimo umbilicato; apertura parviscula, simplici.

THE NEW ZEALAND PUPA. Shell cylindrical, brown, coarsely ribbed; whorls six, apical rather flattened, last umbilicated; aperture rather small, simple.

PFEIFFER. (Vertigo) Mon. 1868, p. 299.

Hab. New Zealand.

Species 127. (Mus. Hanley.)

PUPA MONDEINI. *Pap. testâ solidiusculâ, albâ, breviter cylindricâ, tenuiter costatâ; anfractibus septem, apicalibus rapide crescentibus, brevissimis, duobus medianis ventricosis, rotundis, ultimo alto, infra umbilicato; apertura subquadratâ, edentulâ, elevata, margine simplici angustè reflecto.*

MONDEINI'S PUPA. Shell rather solid, white, shortly cylindrical, finely ribbed; whorls seven, apical, quickly increasing, very short, two middle ventricose, rounded, last high, umbilicated below; aperture rather square, toothless, raised, margin simple, narrowly reflected.

ADAMS. Proc. Zool. Soc.

Hab. Mauritius.

Species 128. (Mus. late Deshayes.)

PUPA BOERCHIGNATI. *Pap. testâ crassiusculâ, albâ, cœquâ d. c. costatâ, breviter subpyramidatâ; ultimo anfractu breviter rimato; apertura suboblique quadratâ, ad anfractum ultimum medio undulato, margine medio subdepresso.*

BOERCHIGNAT PUPA. Shell rather thick, white, irregularly striated, short, subpyramidal; last whorl shortly notched; aperture rather obliquely square, with a single tooth at the last whorl, in the middle, margin rather depressed in the middle.

DESHAYES. Conch. île. Réunion, Pl. XXXVII, Fig. 27, 28.

Hab. Isl. Bourbon.

PUPA.—PLATE XIV.

Species 129. (Mus. late Deshayes.)

PUPA INTERSECTA. *Pup. testâ crassiusculâ, albidâ, subpyramidalâ, prope apicem tumidiusculâ; anfractibus octo, tribus superioribus levibus, cæteris lentè crescentibus, liris inæqualibus irregularibus, distantibus, obliquis sculptis; aperturâ subquadratâ, superne unidentatâ.*

THE INTERSECTED PUPA. Shell rather thick, rather white, rather pyramidal, a little swelled near the apex; whorls eight, three upper smooth, the others slowly increased, sculptured with unequal, irregular, distant oblique ridges; aperture rather square, with a single tooth above.

DESHAYES. *Conch. de l'île de la Réunion, Pl. XXVIII, Fig. 1.*

Hab. Isl. Bourbon.

Species 130. (Mus. Hanley.)

PUPA FERRARI. *Pup. testâ cylindricâ, altâ, fuscâ, crebri-costatâ; anfractibus octo, superioribus brevissimis, ultimo alto, recto, infra latè umbilicato, carinâ desinenti; aperturâ parvâ, angustâ, plicis duobus, prominentibus, acutis, subinternis ad columellam et anfractum ultimum armatâ, labio externo, superne sinuato, tum dente magno incrassato.*

FERRARI'S PUPA. Shell cylindrical, high, brown, close-ribbed; whorls eight, upper very short, last high, straight, broadly umbilicated below, ending in a keel; aperture small, narrow, armed with two prominent short subinternal teeth at the columella and last whorl, outer lip sinuated above, then thickened with a large tooth.

PERO. *Pfeiffer, Mon. 1868, p. 309.*

Pupa bicipitata, Rossmäslcr.

Pupa guttula, Pero.

Hab. Upper Italy.

Species 131. (Mus. Hanley.)

PUPA VENTRICOSA. *Pup. testâ parvâ, brevissimâ, subglobosâ, tenui, fusco-cornéâ; anfractibus quatuor, apicalibus pyramidalis, ultimo subgloboso; aperturâ rotundâ, superne unidentatâ.*

THE VENTRICOSE PUPA. Shell small, very short, rather globose, thin horny brown; whorls four, apical pyramidal, last rather globose; aperture rounded, with a single tooth above.

ADAMS. *Proc. Zool. Soc.*

Hab. Mauritius.

Species 132. (Mus. Hanley.)

PUPA PUPULA. *Pup. testâ minutâ, cornéâ, levî, cylindricâ; apice obtuso; ultimo anfractu breviter rimato; aperturâ brevi subquadratâ, intus tridentatâ, columellâ obliquâ.*

THE PUPIL PUPA. Shell minute, horny, smooth, cylindrical; apex obtuse; last whorl shortly notched; aperture short, rather square, tridentate within, columella oblique.

DESHAYES. *Conch. de l'île de la Réunion. Pl. XXXVIII., Fig. 2.*

Hab. Isl. Bourbon.

Species 133. (Mus. late Deshayes.)

PUPA TURGIDULA. *Pup. testâ brevissimâ, parvâ, obtusâ, breviter rimatâ, densè liratâ, ventricosissimâ; aperturâ edentulâ, brevi, subobliquâ, superne quadratâ, infra rotundâ.*

THE TURGID PUPA. Shell very short, small, obtuse, with a short notch, closely ridged, very ventricose; aperture toothless, short, rather oblique, square above, rounded below.

DESHAYES. *Conch. de l'île de la Réunion.*

Hab. Isl. Bourbon.



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P U P A.

PLATE XV.

Species 134. (Mus. Hanley.)

PUPA FERRARIA. *Pup. testā parvā, altā, cylindricā, ferruginēā; apice obtuso; anfractibus sex, concavis, tenuissimē costulatis, ultimo rimato; aperturā subquadratā, intūs quinquaplicatā, superiōrē propē suturam unidentatā.*

THE IRON PUPA. Shell small, high, cylindrical, ferruginous; apex obtuse; whorls six, convex, very finely ribbed, last notched; aperture subquadrate, with five plaits inside; one tooth above, near the suture.

LOWE. Pfeiffer, Mon. 1868.

Hab. Porto Santo.

Species 135. (Mus. Hanley.)

PUPA VINETA. *Pup. testā subpyramidalī, fusco-cornēā, politā; apice obtuso; ultimo anfractu lato, longē rimato; aperturā parvā, subquadratā, columellā plicā albā, tenui, elongatā, ultimo anfractu plicis duobus inaequalibus, arcuatis, superiori elongatissimā, instructis labio exterio superiōrē sinuato, unidentato; lamina internā filiformi.*

THE BOUND PUPA. Shell rather pyramidal, horny brown, polished; apex obtuse; last whorl broad, with a long notch; aperture small, rather square, columella set with a white thin long plait, last whorl with two unequal, arched, the upper very long; outer lip sinuous above, with a tooth; internal lamina filiform.

LOWE. Pfeiffer, Mon. 1868, p. 21.

Hab. Madeira.

Species 136. (Mus. Hanley.)

PUPA SPHINCTOSTOMA. *Pup. testā altā, cornēā, tenui, inaequaliter liratā; ultimo anfractu rimato et umbilicato, ad dorsi medianā per laciniam internam contracto, ad aperturam plicā parvā, et plicā*

suturali elongatissimā extenso munito, columellā uniplicatā, labio exterioro superiōrē sinuato et unidentato.

THE SPHINX-MOUTHED PUPA. Shell high, horny, thin, unequally ridged; last whorl notched and umbilicated, contracted at the middle of the back by the internal lamina, furnished at the aperture with a small plait and a very far extended sutural plait; columella with one plait, outer lip with a sinus and a tooth above.

LOWE. Pfeiffer, Mon. 1868.

Hab. Madeira.

Species 137. (Mus. Hanley.)

PUPA CASSIDA. *Pup. testā brevī, ventricosā, rubrafusā, dimidiatim albo-maculatā, breviter liratā, liris rectisculis; apice obtuso, anfractibus sex, brevissimis; ultimo brevī, asque ad medianā albo-maculato, infra medianā innuacuato, laevigato; aperturā subtriangulā, infra acuminatā, per plicās albas, catulas, contractā.*

THE HELMET PUPA. Shell short, ventricose, red-brown, half white-spotted, finely ridged, ridges rather straight; apex obtuse, whorls seven, very short; last short, white-spotted as far as the middle; not spotted below the middle; smooth; aperture rather trigonal, acuminate below, contracted by white strong plaits.

LOWE. Pfeiffer, Mon. 1868, p. 373.

Hab. Madeira.

Species 138. (Mus. Hanley.)

PUPA ARMIFERA. *Pup. testā pallidā, cornēā, semipellucidā, brevī, obtusā; anfractibus sex, brevibus, medianis inflatis, ultimo umbilicato; aperturā elevatā, brevī, intūs quadriplicatā.*

THE ARM-BEARING PUPA. Shell pale, horny, semipellucid, short, obtuse; whorls six, short; middle inflated, last umbilicated; aperture raised, short, four-plaited within.

SAY, Pfeiffer, Mon. 1868, p. 29.

Hab. N. America.

Species 139. (Mus. Hanley.)

PUPA CONCINNA. *Pup. testâ fuscâ, tenuissimè striatâ, brevi; apice obtuso; anfractibus sex, brevibus, medianis ventricosâ, ultimo longè rimato; aperturâ elevatâ, plicis quinque principalibus, ceteris minutis, suturali latissimè expansa, descendenti.*

THE NEAT PUPA. Shell brown, very finely striated, short; apex obtuse, whorls six, short, middle ventricose, last with a long notch; aperture raised, five principal plaits, others minute, sutural very broadly expanded, descending.

LOWE, Pfeiffer, Mon. 1868, p. 310.

Hab. Madeira.

Species 140. (Mus. Hanley.)

PUPA PENTODON. *Pup. minutâ, cornu levigatâ, brevi, ventricosâ, anfractibus tribus rotundis, aperturâ brevi, latiusculâ, dentibus quinque, ad anfractum ultimum uno, ad columellam uno, ad marginem internum labii externi tribus, medianâ longè productâ.*

THE FIVE-TOOTHED PUPA. Shell minute, horny, smooth, short, ventricose; whorls five, one on the last whorl, one on the columella, three on the inner edge of the outer lip, middle long, produced.

SAY, Binney, Terrestrial Mollusca, p. 143.

P. curridens, Gould.

P. Tappaniana, Ward.

Hab. North America.

Species 141. (Fig. a, b. Mus. Hanley.)

PUPA LAYARDI. *Pup. testâ levigatâ, fuscâ, vel albâ-rufâ; altâ, pyramidatâ, versus apicem attenuatâ, medio subventricosâ; anfractibus novem, concentricis, ultimo angustiusculâ, longè rimato, ante aperturam subsulcato, productâ, coarctatâ; aperturâ subovatâ, margine externo tenuissimo, interno quinqueplicato, plicis laminatis, productis, medio approximatis.*

LAYARD'S PUPA. Shell smooth, brown, or glassy white; high, pyramidal, attenuated towards the apex, rather ventricose in the middle; whorls nine, rather convex, last rather narrow, with a long notch, a little uncoiled before the aperture, produced, narrowed; aperture ovate, outer edge very thin, inner five-plaited, plaits laminar, produced, nearly meeting in the middle.

BENSON, Ann. and Mag. Nat. Hist., 3 Ser. XIII. June, 1864.

Hab. Cape Bredasdorp.

Species 142. (Mus. Hanley.)

PUPA SHUTTLEWORTHII. *Pup. testâ minutâ, fuscâ, brevi, ventricosâ; anfractibus quinque, ventricosâ, ultimo longè rimato; aperturâ parvâ, brevî, ad anfractum ultimam multiplicatâ.*

SHUTTLEWORTH'S PUPA. Shell minute, brown, smooth, short, ventricose; whorls five, ventricose, last with a long notch; aperture small, short, with a single plait on the body whorl.

ALBERS, Pfeiffer (Balanus), Mon. 1868.

Hab. Columbia.



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P U P A.

PLATE XVI.

Species 143. (Mus. Hanley.)

PUPA PIERREI. *Pup. testâ albâ, altâ, brevi; anfractibus septem, tribus superioribus brevibus, rotundis, pedibus, quatuor inferioribus rectilateralibus, striatis, altis, ad suturam subangulatis, ultimo infra subangulato, rimato; apertura rectâ, perpendiculariter oblongâ, collo saturali conspicuo, magno.*

PIERRE'S PUPA. Shell white, high, smooth; whorls seven, three upper short, round, polished, four lower straight-sided, striated, high, with a slight angle at the suture, the last angular below, notched; aperture straight, perpendicularly oblong, with a conspicuous large, sutural callus.

PREIFFER. (Eunee.) Proc. Zool. Soc. 1854, p. 295.

Hab. Koondah Mountains, near Calicut.

Species 144. (Mus. Hanley.)

PUPA VARA. *Pup. testâ albâ, fusiformi, regulariter costatâ; anfractibus septem, superioribus duobus rotundis levissimis, medianis inflatis, convexis, ultimo contracto, tortuoso; apertura elevatâ, auriformi, labio externo supra medium calidissimè sinuatim plicato.*

THE VARA PUPA. Shell white, fusiform, regularly ribbed; whorls seven, upper two rounded, very smooth; middle inflated, convex, last contracted, tortuous; aperture raised, ear-shaped, outer lip very strongly sinuously plaited.

BENSON. (Eunee.) Ann. Nat. Hist. 1859.

Hab. Khasi Hills.

Species 145. (Mus. Hanley.)

PUPA CEYLANICA. *Pup. testâ albâ, levigatâ, semipellucidâ; anfractibus sex, breviusculis, prominentibus; apertura elevatâ, obliquè retrorsâ, triplicatâ, collo saturali conspicuo, margine reflexo.*

THE CEYLON PUPA. Shell white, smooth, semipellucid; whorls six, rather short, prominent; aperture raised, obliquely bent backwards, with three plaits, sutural callus conspicuous, margin reflected.

PREIFFER. (Eunee.) Proc. Zool. Soc. 1855.

Hab. Ceylon.

Species 146. (Mus. Sir D. Barclay.)

PUPA BARCLAYI. *Pup. testâ brevi, obtusâ, subcylindrico, albâ, obliquè costatâ; anfractibus quinque, rectilateralibus, ultimo alto, infèrè umbilicato et rimato; apertura magna, perpendiculariter oblongâ, antice obliquè productâ, plerâ medianâ anfractibus ultimi magis, columellâ dentatâ, profundâ.*

BARCLAY'S PUPA. Shell short, obtuse, subcylindrical, white, obliquely ribbed; whorls five, rectilateral, last high, umbilicated and notched below; aperture large, perpendicularly oblong, anteriorly obliquely produced, median plait of the last whorl large, columella toothless, deep.

H. ADAMS. Proc. Zool. Soc. 1868, Pl. IV.

Hab. Mauritius.

Species 147. (Mus. Hanley.)

PUPA LAPIDARIA. *Pup. testâ, altâ, cornuâ, brevi, cæcis apicem subpyramidalatâ, apice obtuso, supra medium et infra cylindricâ; anfractibus septem, rectilateralibus, ultimo alto, profundè rimato; apertura ovatâ, albâ, prominenter triplicatâ, labio externo supra medium tumido.*

THE LAPIDARY PUPA. Shell raised, horny, smooth, rather pyramidal towards the apex, apex obtuse, cylindrical above the middle and below; whorls seven, straight-sided, last high, deeply notched; aperture ovate, white, with three prominent plates, outer lip tumid above the middle.

HUTTON. Journ. As. Soc. Beng. 1849.

Hab. Afghanistan.

Species 148. (Mus. Hanley.)

PUPA BRADLEY. *Pup. testâ altissimâ, hyalinâ, albâ; anfractibus septem, apicalibus tumidis, alteris subquadratis, ultimo alto, infèrè subcontracto, rimato; apertura subauriformi, conspicuè triplicatâ, labio externo supra medium profundè sinuato, collo saturali conspicuo.*

THE TWO-COLOURED PUPA. Shell very high, glassy, white; whorls seven, apical tumid, others rather square, last high, a little contracted below,

PUPA.—PLATE XVI.

notched; aperture rather auriform, conspicuously three-plaited, outer lip with a deep sinus above the middle, sutural callus conspicuous.

HUTTON. Journ. As. Soc. Beng. 1834.

Pupa mellita, Gould.

Hab. Mirzapore, Tavoy, Ceylon.

Species 149. (Mus. Sir D. Barclay.)

PUPA CERNICA. *Pup. testâ brevi, opacâ, sordidè albâ, crebrè liratâ, cylindricâ; apice obtuso; anfractibus sex, superioribus brevissimis, alteris latissimis, ultimo profunde rimato et umbilicato; apertura ad ultimum anfractum uniplicatâ.*

THE MAURITIAN. Shell short, opaque, dull white, closely ridged, cylindrical; apex obtuse; whorls six, upper very short, others wide, last deeply notched and umbilicated; aperture with a single plait on the last whorl.

A. ADAMS. Proc. Zool. Soc. 1868, Pl. IV.

Hab. Mauritius.

Species 150. (Mus. Hanley.)

PUPA SALVINIANA. *Pup. testâ latè pyramidatâ, brevî, cornuâ, apice acuminatâ, anfractibus sex, rapidè crescentibus, ultimo longè rimatâ; apertura frè ad suturam ultimâ anfractis elevata, subauriformi, anticè obliquè producta, prominenti quodrepleta, margine albo, labio exteriori supra medianâ sinuato.*

SALVIN'S PUPA. Shell broadly pyramidal, short, horny, apex acuminate; whorls six, rapidly increasing, last with a long notch; aperture raised almost to the suture of the last whorl, rather

auriform, anteriorly obliquely produced, with four prominent plaits, margin white, outer lip sinuous above the middle.

THEOBALD. Journ. As. Soc. Beng. 1870.

Hab. Shan States.

Species 151. (Mus. Hanley.)

PUPA PLACIDENS. *Pup. testâ brevî, latâ, corneo-subcicidî, brevî, spirâ pyramidatâ, apice obtuso; anfractibus quatuor, rotundè prominentibus, ultimo magno, infèrè subangustatâ, longè rimatâ; apertura obliquè subauriformi, validè dentato-plicatâ.*

THE TOOTHPLAITED PUPA. Shell short, broad, greenish-horny, smooth, spire pyramidal, apex obtuse; whorls four, roundly prominent, last large, rather narrow below with a long notch; aperture obliquely rather auriform, with strong tooth-plaits.

BENSON. Ann. Nat. Hist. 1849.

Hab. Himalaya.

Species 152. (Mus. Hanley.)

PUPA BATHYDON. *Pup. testâ parvâ, pyramidatâ, brevî, fuscâ, apice acuminatâ; anfractibus quinque, rotundis, ultimo profunde rimato; apertura acuminatâ, quinqueplicatâ, anticè obliquè productâ.*

THE DEEP-TOOTHED PUPA. Shell small, pyramidal, smooth, brown, apex acuminate; whorls five, rounded, last deeply notched; aperture orange, five-plaited, anteriorly obliquely produced.

BENSON. Ann. Nat. Hist. 1863.

Hab. Narbudda.



P U P A.

PLATE XVII.

Species 153. (Mus. Hanley.)

PUPA SCALARINA. *Pup. testâ fusâ, fusiformi, profundè rimatâ; spirâ acuminatâ; anfractibus quinque, angulatis, plicatis; ultimo ad medium contracto; aperturâ auriformi, plicis tribus, labio cetero supra medium sinuatum contracto.*

THE SCALARIFORM PUPA. Shell brown, fusiform, deeply notched; spire acuminated; whorls five, angular, plaited, last contracted in the middle; aperture ear-shaped, with three plaits, outer lip sinuously contracted above the middle.

GUNDLACH. Pfeiffer, Malak. Bl. 1860.

Hab. Sicily (?), Cuba.

Species 154. (Mus. Hanley.)

PUPA NITHA. *Pup. testâ parvâ, hevi, subcentricâ, hevi, i. scâ; anfractibus quinque, rotundis, hevis, suturâ profundâ; aperturâ hevi, edentulâ.*

THE SHINING PUPA. Shell small, short, rather ventricose, smooth, brown; whorls five, round, short, suture deep; aperture short, without teeth.

ANTONELLI. Pfeiffer, Mon. II. p. 335.

Hab. Greece.

Species 155. (Mus. Hanley.)

PUPA FOREALIS. *Pup. testâ minutâ, subdiaphanâ, succinâ; anfractibus quinque ad sex, altissculis, subcentricis, ultimo rimato; aperturâ hevi, dentibus minutissimis.*

THE FOREAL PUPA. Shell minute, a little transparent, amber; whorls five or six, rather high, rather ventricose, the last notched; aperture short, with very minute teeth.

MORELET. Journ. Conch. VII. 1858.

Hab. Kamtschatka.

Species 156. (Mus. Hanley.)

PUPA GRANUM. *Pup. testâ elongato-fusiformi, fusâ, altâ, angustâ; anfractibus octo, altissculis, superi-*

oribus versus apicem attenuatis, ultimo hevi, longè rimato; aperturâ parvâ, plicis circâ quinque.

THE GRAIN PUPA. Shell elongate, fusiform, brown, high, narrow; whorls eight, rather raised, upper attenuated towards the apex, last short with a long notch; aperture small, plaits about five.

DEBAENAUD. Conch. Tetterest. et Fluv.

Hab. France, Spain, Greece, Italy, &c.

Species 157. (Mus. Hanley.)

PUPA FARINOSA. *Pup. testâ pyramidalâ, altâ, purpureo-fusâ, hevi; anfractibus sex, gradatim crescentibus, convergentibus, ultimo angustâ, ventricosa, longè rimato; aperturâ ovatâ, edentulâ, margine leni.*

FARINE'S PUPA. Shell pyramidal, raised, purple-brown, smooth; whorls six, gradually increased, rather convex, last large, ventricose, with long notch; aperture ovate, without teeth, margin thin.

DESMAREST. Rev. et Mag. Zool. XV. 1862.

Hab. Pyrenees.

Species 158. (Mus. Hanley.)

PUPA TRUNCATELLA. *Pup. testâ albâ, cylindricâ, costâ livâ; anfractibus sex, inferioribus tribus subequalibus, duobus apicalibus minutis, ultimo alto, cylindrico, breviter rimato et unilobato.*

THE TRUNCATELLA PUPA. Shell whitish, cylindrical, straightly ridged; whorls six, lower three nearly equal, two apical minute, last raised, cylindrical; shortly notched and unilobated.

PEREYER. Mon. Vol. IV. 1868.

Hab. Transylvania, Turkey.

Species 159. (Mus. Hanley.)

PUPA BIGANATA. *Pup. testâ cylindricâ, minutâ, hevi, fulvâ, hevi; anfractibus septem, medianis subequalibus; ultimo breviter rimato; aperturâ parvâ, margine profundè incrassato, ultimo anfractu undulato.*

PUPA.—PLATE XVII.

THE TWO-GRAINED PUPA. Shell cylindrical, minute, short; whorls seven, middle ones nearly equal, last shortly notched; aperture small, margin deeply thickened, last whorl with a single tooth.

ROSSMASLER. Pflr. Mon. II. p. 354.

Hab. Germany.

Species 160. (Mus. Hanley.)

PUPA ROWELLII. *Pup. testâ minutâ, fuscâ, politâ, ventricosâ; anfractibus quatuor, ultimo et penultimo ventricosis, altis, ultimo longè rimato; aperturâ subtrigona, plicis dentiformibus tribus vel quatuor.*

ROWELL'S PUPA. Shell minute, brown, smooth, ventricose; whorls four, last and last but one ventricose, high, last with a long notch; aperture subtrigonal, with three or four tooth-like plaits.

NEWCOMB. Ann. Lyc. New York, VII. 1861.

Hab. Oakland, California.

Species 161. (Mus. Hanley.)

PUPA CUPA. *Pup. testâ breviter cylindricâ, cornâ, apice obtuso; anfractibus quinque, brevibus, tribus inferioribus latis, levibus, ultimo profundè rimato,*

ad aperturam indentatâ; aperturâ parvâ, subrotundâ, margine profundè incrassatâ.

THE BUTT PUPA. Shell shortly cylindrical, horny, apex obtuse; whorls five, short, three lower broad, smooth, last deeply notched, with a single tooth at the aperture; aperture small, rather round, margin deeply thickened.

KÜSTER. Fide Hanley.

Hab. Switzerland.

Species 162. (Mus. Hanley.)

PUPA SITENS. *Pup. testâ parvâ, pallidè cornâ, subpyramidatâ, apice obtuso; anfractibus quatuor, declivibus, ultimo magno, profundè rimato; suturâ profundâ; aperturâ parvâ, subquadratâ, plicis quatuor, unâ ad anfractum ultimum productâ, bifidâ, unâ columellari, duabus intus labium externum instructis parvis, rotundis.*

THE SHINING PUPA. Shell small, pale, horny, rather pyramidal, apex obtuse; whorls four, sloped, last large, deeply notched; suture deep, aperture small, rather square, with four plaits, one at the last whorl, produced, bifid, one columellar, two small, round, placed within the outer lip.

PEASE. Proc. Zool. Soc. 1860, p. 439.

Hab. Isl. Ebon, Marshall's Group.



P U P A.

PLATE XVIII.

Species 163. (Mus. Sowb.)

PUPA MINUTISSIMA. *Pup. testā minutā, fuscā, cylindricā, levi, apice obtuso; anfractibus quinque, rotundis, tribus inferioribus subequalibus, ultimo profundē rimato; aperturā parvā, subovatā, ad anfractum ultimum indentatā.*

THE VERY SMALL PUPA. Shell minute, brown, cylindrical, smooth, with obtuse apex; whorls five, rounded, three lower nearly equal, last with a deep notch; aperture small, rather oval, with a single tooth on the last whorl.

HARTMAN. Pfeiffer, Mon. 1868, p. 391.

Hab. Central Europe.

Species 164. (Mus. Hanley.)

PUPA MILLIUM. *Pup. testā minutā, cornuā, subulphanā, pallidā, cylindricā, apice obtuso; anfractibus quatuor, inferioribus subequalibus; aperturā parvā, quinqueplicatā.*

THE MILLET PUPA. Shell minute, horny, rather transparent, polished, cylindrical, apex obtuse; whorls four, the lower ones nearly equal; aperture small, five-plaited.

GOULD. Pfeiffer, Mon. 1868, p. 335.

Hab. North America.

Species 165. (Mus. Hanley.)

PUPA DECORA. *Pup. testā minutā, pallidē cornuā, subcylindricā, subulphanā, levi; anfractibus quinque, apicalibus subattenuatis, ultimo breviter rimato; aperturā parvā, quadridentatā.*

THE DECOROUS PUPA. Shell minute, pale horny, subcylindrical, a little transparent, smooth; whorls five, apical ones rather attenuated, last shortly notched; aperture small, four-toothed.

GOULD. Otia Conchologica, p. 292.

Hab. North America.

Species 166. (Mus. Hanley.)

PUPA POTTEBERGENSIS. *Pup. testā sinistressā, pallidissimē roseā, subcylindricā, subcentricā, levi,*

apice obtuso, fusco; anfractibus novem, superioribus subattenuatis, alteris subequalibus, ultimo longē rimato, profundē umbilicato; aperturā ad anfractum ultimum elevatā, prope marginem quinqueplicatā, margine levi.

THE POTTEBERG PUPA. Shell sinistral, very pale rose, rather cylindrical, rather ventricose, smooth, apex obtuse, brown; whorls nine, upper rather attenuated, the others nearly equal, last with a long notch, deeply umbilicated; aperture raised on the last whorl, five-plaited near the margin, margin thin.

KRAUSS. Pfeiffer, Mon. 1868, p. 297.

Hab. Cape of Good Hope.

Species 167. (Mus. Hanley.)

PUPA RECTA. *Pup. testā elongatā, cylindricā, angustā, levi, cornuā, fuscocrucescenti trifasciatā, apice obtuso; anfractibus septem, duobus apicalibus parvis, alteris subequalibus, rotis, ultimo longē rimato; aperturā parvā, auriformē, plicis ad anfractum ultimum duabus, ad columellam una, indivisā, elongatā, labio externo supra medium sinuatum incrassato.*

THE STRAIGHT PUPA. Shell elongated, cylindrical, narrow, smooth, horny, three-banded with reddish-brown, apex obtuse; whorls seven, two apical small, others nearly equal, straight, last with a long notch; aperture small, ear-shaped, plaits on the last whorl two, on the columella one, inside one elongated, outer lip sinuously thickened above the centre.

LOWE. Pfr. Mon. 1868, p. 399.

Hab. Madeira.

The whorls are banded with a vinous brown.

Species 168. (Mus. Hanley.)

PUPA MONTICOLA. *Pup. testā brevi, cylindricā, crebri levitā, medio anfractuum et ad suturam rubro fasciatā; anfractibus sex, apicalibus duobus obtusissimē compressis, alteris subequalibus, ultimo ad medium subcompressis, longissime rimato; apice*

turā angustā, subovatā, ad anfractum ultimum intus uniplicatā, ad marginem prope suturam plicā callosā suprā infraque extensā instructā, labio externo intus biplicatā.

THE MOUNTAIN PUPA. Shell short, cylindrical, closely ribbed, banded with red in the middle and at the suture of the whorls; whorls six, two apical very bluntly flattened, the others nearly equal, last rather compressed in the middle, with a very long notch; aperture narrow, subovate, with a single plait within on the body whorl, near the suture at the margin set with a callous plait extended over and under, outer lip with two inner plaits.

LOWE. Pflr. Mon. 1868, p. 311.

Hab. Porto Santo, Madeira.

Species 169. (Mus. Hanley.)

PUPA PLANTI. *Pup. testā ventricosā, tenui, subdiaphanā, albā, tenuiter oblique liratā, apice obtuso; anfractibus septem, latis, converisculis, ultimo breviter rimato, aperture latere subcompressa; aperture brevi, latā, callo suturali acuto, plicā columellari internā latā, laniatā.*

PLANT'S PUPA. Shell very ventricose, thin, subdiaphanous, whitish, finely obliquely ridged, apex obtuse; whorls seven, broad, rather convex, last shortly notched, rather flattened on the side of the aperture; aperture short, broad, sutural callus sharp, columellar plait broad, laminated.

PFEIFFER. Proc. Zool. Soc.

Hab. Port Natal.

Species 170. (Mus. Hanley.)

PUPA SAXICOLA. *Pup. testā minutā, subviridē corneā, subcylindricā, nitenti, subdiaphanā, apice obtuso; anfractibus quatuor, ultimo magno, longē rimato; aperture subovatā, plicis ad anfractum ultimum duabus, columellari unā, intus duabus parvis, margine angustā, albā.*

THE ROCK-INHABITING PUPA. Shell minute, greenish-

horny, subcylindrical, shining, rather transparent, apex obtuse; whorls four, the last large, with a long notch; aperture rather oval, with two plaits on the last whorl, one columellar and two small within, margin narrow, white.

LOWE. Pflr. Mon. 1868, p. 321.

Hab. Madeira.

Species 171. (Mus. Hanley.)

PUPA IRRIGUA. *Pup. testā fusco-corneā, levigatā, subcylindricā, supernē subattenuatā; anfractibus septem, suturā profundā separatā, ultimo longē rimato; aperture subauriformi, supernē cuneatā, supra medianā contractā, callo suturali et plicā ultimā anfractūs valdē elongatis, plicā internā rotundā, plicā columellari elongatā, declivi.*

THE BROOK PUPA. Shell brown-horn, smooth, rather cylindrical, rather attenuated above; whorls seven, separated by a deep suture, last with a long notch; aperture partly auriform, cuneate above, contracted above the middle, sutural callus and plait of the last whorl much elongated, internal plait strong, columellar plait elongated, sloped downwards.

LOWE. Pflr. Mon. 1868, p. 321.

Hab. Madeira.

The plaits in the mouth seem to fill it up by their great extension.

Species 172. (Mus. Hanley.)

PUPA EDENTULA. *Pup. testā parvā, corneā, brevi, pulitā, semipellucidā, spirā versus apicem paulō attenuatā; anfractibus septem, rotundis, ultimo breviter rimato; aperture brevi, edentulā, margine tenui.*

THE TOOTHLESS PUPA. Shell small, horny, short, polished, semipellucid, spire a little attenuated towards the apex; whorls seven, rounded, last shortly notched; aperture short, without teeth, margin thin.

DEAPENAUD. Moll. Terr. et Flav.

Hab. Europe.



P U P A.

PLATE XIX.

Species 173. (Mus. Hanley.)

PUPA FANTILLA. *Pup. testâ minutâ, ventricosâ, fuscâ, brevî; anfractibus quatuor, baccibus, ventricosis, rotundis, ultimo majusculo, infra umbilicato; apertura obliquâ, subauriformi, quadridentatâ, labio exteriori supra medianâ tumido, sinuato.*

THE TINY PUPA. Shell minute, ventricose, brown, short; whorls four, short, ventricose, round, last rather large, umbilicated below; aperture oblique, rather auriform, four-toothed, outer lip tumid and sinuated above the middle.

GOULD. (Vertigo) Pfr. Mon. III.

Hab. Tahiti.

Species 174. (Mus. Hanley.)

PUPA ELEGANTULA. *Pup. testâ albâ, pellucidâ, clavatâ, superne obtusâ, ventricosâ, infra gradatim attenuatâ; anfractibus sex, apicali planulato, ultimo rinato, contracto; apertura subtrigona, callo suturali conspicuo.*

THE ELEGANT LITTLE PUPA. Shell white, pellucid, club-shaped, obtuse above, ventricose, gradually attenuated below; whorls six, apical flattened, last notched, contracted; aperture subtrigonal with conspicuous sutural callus.

PFEIFFER. Proc. Zool. Soc. 1846, p. 185.

Hab. Liberia.

A curiously formed little shell, very thick towards the apex, and gradually tapering downwards.

Species 175. (Mus. Hanley.)

PUPA ANGUSTIOR. *Pup. testâ minutâ, sinistorsâ, fuscâ; anfractibus quinque, convexis, ultimo breviter umbilicato; apertura parvâ, latâ, triplicatâ, labio exteriori supra medianâ sinuato et dentato-plicatâ.*

THE NARROW PUPA. Shell minute, sinistral, fulvous; whorls five, convex, last shortly umbilicated; aperture small, broad, three-plaited, outer lip sinuous above the middle, with a tooth plait.

JEFFREYS. (Vertigo) Pfr. Mon. 1868, p. 336.

Vertigo Venetii, Charpentier.

Vertigo lamata, Held.

Hab. Britain, France, Germany, Spain, &c.

Species 176. (Mus. Hanley.)

PUPA MENKEANA. *Pup. testâ brevissimâ, albâ, tenuiter et regulariter lineatâ, ventricosâ, apice obtusâ; anfractibus septem, medianis ventricosis, ultimo longe rinato, infra contracto, dorso post aperturâ marginem contracto et profundè forcato; apertura subquadratâ, latus et prope marginem latè et profundè plicatâ, margine reflexo, expanso.*

MENKE'S PUPA. Shell rather short, whitish, finely and regularly ridged, ventricose, apex obtuse; whorls seven, middle ventricose, last with a long notch, contracted below, contracted and deeply pitted at the back, behind the margin of the aperture; aperture subquadrate, within and near the margin broadly and deeply plaited, margin reflected, expanded.

PFEIFFER. (Azeca) Mon. 1868, p. 255.

Hab. Central Europe.

In the later monographs, Pfeiffer seems to have mixed up this shell with the well-known European *Azeca trilevis*, with which it has little affinity.

Species 177. (Mus. Hanley.)

PUPA CAPITATA. *Pup. testâ albâ, semipellucidâ, egilindricâ, brevî, prope apicem inflatâ; anfractibus quinque, obliquè tenuiter lineatis, ultimo obliquè profundè rinato, infra rimam tumido et subaurato; apertura subauriformi, ratâ contractâ, intus dentato-plicatâ, plicâ suturali magis, expansâ, margine reflexo et expanso.*

THE HEADED PUPA. Shell whitish, semipellucid, cylindrical, short, inflated near the apex; whorls five, obliquely finely ridged, last obliquely deeply notched, tumid and partly keeled below the notch; aperture rather ear-shaped, contracted

PUPA.—PLATE XIX.

without, tooth-plaited within, sutural plait large, expanded, margin reflected and expanded.

GOULD. —? (quoted by Hanley.)

Hub. Cape Patmos.

Species 178. (Mus. Hanley.)

PUPA FUNICULA. *Pap. testâ altâ, cylindricâ, solidâ, subrosâ, oblique lirâtâ; apice obtuso; anfractibus sex, rectiusculis, medianis subequalibus, ultimo obtusissimè angulato vix rimato; aperturâ subquadratâ, edentulâ; margine reflexo, subexpanso; columella latâ.*

THE FUNNEL PUPA. Shell high, cylindrical, solid, rather pink, oblique-ridged, apex obtuse; whorls six, rather straight, middle nearly equal, last very obtusely angular, scarcely notched; aperture rather square, toothless; margin reflected, rather expanded; columella broad.

VALENCIENNES. Pfl. Mon. 1868, p. 287.

Hub. Isle of France.

Species 179. (Mus. Hanley.)

PUPA CYCLOSTOMA. *Pap. testâ brevi, ventricosâ, costis rectiusculis sculptâ, subrosâ, apice obtusiusculo, medio inflato; anfractibus sex, brevibus, ultimo profundè rimato; aperturâ subovatâ, columellâ et anfracta ultimo implicatis; margine albo reflexo, rotundâ.*

THE ROUND-MOUTHED PUPA. Shell short, ventricose, sculptured with rather straight ribs, rather pink, apex rather obtuse, inflated in the middle; whorls six, short, last deeply notched; aperture rather ovate, columella and last whorl single-plaited; margin white, reflected, round.

KESTER. Pfeiffer, Mon. 1868, p. 293.

Pupa Küsteri, Pfeiffer (var.)

Hub. Cuba.

Species 180. (Mus. Hanley.)

PUPA LACHRYMA. *Pap. testâ albâ, pellucidâ, clavatâ, cylindricâ, superiùs tumidâ, infrà rectâ, apice obtuso; anfractibus sex, ultimo alto, infrà oblique breviter rimato; aperturâ trigonâ, plicâ suturali et plicâ dentiformibus tribus conspicuis, crassâ.*

THE TEAR PUPA. Shell whitish, pellucid, club-shaped, cylindrical, tumid above, straight below, apex obtuse; whorls six, last high, with a short oblique notch below; aperture trigonal, sutural plait and three dentiform plaits conspicuous, thick.

AUT. —? (Mus. Brit.)

Hub. Liberia.

Species 181. (Mus. Hanley.)

PUPA TERES. *Pap. testâ altâ, cylindricâ, elegantè oblique lirâtâ, albâ, opacâ, superiùs tumidâ, infrà subattenuatâ; anfractibus septem, inferioribus angustioribus, ultimo arcuatim rimato, suturâ profundâ; aperturâ edentulâ, perpendiculariter oblongâ.*

THE LONG-ROUNDED PUPA. Shell raised, cylindrical, elegantly obliquely ridged, white, opaque, tumid above, slightly attenuated below; whorls seven, lower half-power, last with a curved notch, suture deep; aperture toothless, perpendicularly oblong.

PFEIFFER. Mon. 1868, p. 297.

Helix palungula, Ferussac.

Hub. Mauritius.

Species 182. (Mus. Hanley.)

PUPA KURRI. *Pap. testâ sinistrorsâ, latè pyramidatâ, lavi, caruleo-albidâ, apice acuminato; anfractibus octo, gradatim crescentibus, ultimo profundè et longè rimato, infrà rimam tumido et subcarnato; aperturâ elevatâ, subtrigonâ, intus quadruplicato callo suturali oblique elongato, laminato, margine tenui, vix reflexo.*

KURRI'S PUPA. Shell sinistral, broadly pyramidal, smooth, bluish-white, apex acuminate; whorls eight, gradually increasing, last with a deep long notch, tumid and slightly keeled below the notch; aperture raised, subtrigonal, with four plaits within sutural callus obliquely elongated, laminar, margin thin, scarcely reflected.

KRAUSS. Pfeiffer, Mon. 1868, p. 297.

Pupa acularis, Kurr.

Pupa fonticola, Deshayes.

Hub. Cape of Good Hope.



185.



183.



184.



186.



187.



188.



189.



190.



191.



192.



193.



192.

P U P A.

PLATE XX.

Species 183. (Mus. Brit.)

PUPA ANTI-VERIGO. *Pup. testâ minutâ, dextrali, brevi, ventricosi, loricatâ; anfractibus quatuor; apice obtuso; aperturâ trigonâ, infidâ acuminatâ, dentibus octonis aut novis, utroque latere tribus.*

THE OPPOSITE WHORLED PUPA. Shell minute, dextral, short, ventricose, smooth; whorls four; apex obtuse; aperture trigonal, acuminated below, teeth, eight or nine, three on each side.

DEAPARNACI. 'Tabl. des Mollusques de la France,' p. 59.

Pupa Obovalentata. Hartman.

Hab. Great Britain, Ireland, and France.

The aperture is triangular, with two or three teeth on each side between the angles. The small shells belonging to the group named 'VERIGO,' by some authors being sinistral, this species, exactly resembling them in other respects, receives the above name because it is dextral.

Species 184. (Mus. Hanley.)

PUPA MORCETI-A. *Pup. testâ ovatâ; pallidâ fulcâ, parvâ, sublaevigatâ; anfractibus quinis, altiusculis, convexis, suturâ profundâ; ultimo anfractu oblongo, rimato; aperturâ subovatâ, margine simplici, reflexo.*

THE UNPRETENDING PUPA. Shell ovate, pale fulvous, small, rather smooth; whorls five, rather elevated, convex, with deep suture; last whorl oblong, creased; aperture subovate; margin simple, reflected.

GOULD. — ?

Hab. Florida.

A Bulimus-like little shell.

Species 185. (Mus. Brit.)

PUPA SUBSTRATIATA. *Pup. testâ minutâ, fuscâ, dextrali, breviter cylindricâ, latâ, obliquè striatâ, anfractibus quaternis, brevibus; aperturâ subauriformi, margine reflexo, albo, sex-dentato.*

THE SUBSTRATIATA PUPA. Shell minute, brown, dextral, shortly cylindrical, broad, obliquely striated, whorls four, short; aperture somewhat auriform, margin reflected, white, six-toothed.

GRAY. (Vertigo) Brit. Mus. MS.

Hab. Great Britain and Germany.

Species 186. (Mus. Brit.)

PUPA FUSILLA. *Pup. testâ minutâ sinistrali, fusco-fusâ, brevi; anfractibus obliquis, apicali obtuso, ultimo subhelici; aperturâ sinuatâ trigonâ, margine externo bidentato, interno superâ bidentato, columellâ uniplicatâ.*

THE DWARF PUPA. Shell minute, sinistral, smoky brown, smooth; whorls oblique, apical obtuse, last a little sloped; aperture sinuously trigonal, outer margin with two teeth, inner with two teeth above, columella with one fold.

MÜLLER. Pfeiffer Mon. Hel. VI. p. 336.

Pupa vertigo. Draparnaud.

Hab. Germany, Spain, England.

Species 187. (Mus. Brit.)

PUPA WALBERGI. *Pup. testâ subtrubinatâ, cylindricâ, albâ, brevi, semipellucidâ, anfractibus septenis, apicalibus duobus depressis, alteris subequalibus, ultimo angustato, breviter rimato; aperturâ brevi, subauriformi; plicâ suturali magnâ, dente columellari prominente, labio externo tridentato.*

WALBERG'S PUPA. Shell rather turbinated, cylindrical, white, smooth, semipellucid; whorls seven; apical two depressed, others nearly equal, last narrow, shortly creased; aperture short, rather auriform; sutural plait large, columellar tooth prominent, outer lip tridentate.

PFEIFFER. Mon. Hel. Vol. VII.

Hab. S. Africa.

Species 188. (Mus. Hanley.)

PUPA DESHAYESI. *Pup. testâ parvâ, albâ, cylindricâ, subtrubinatâ; anfractibus octonis, brevibus costatis; ultimo profundè rimato; aperturâ sursum acclivi, brevi; plicâ suturali conspicuâ.*

DESHAYES'S PUPA. Shell small, white, cylindrical, slightly turbinated; whorls eight, short, ribbed; last deeply creased; aperture turned upwards, short; sutural plait conspicuous.

A DAMS. — ?

Hab. — :

PUPA.—PLATE XX.

Species 189. (Mus. Hanley.)

PUPA DORMEYER. *Pup. testâ cylindricâ, turbinatâ, cornâ, laevi; anfractibus novenis, apicalibus parvis, sequentibus superioribus latis, inferioribus gradatim angustatis, ultimo profundè rinato, aperturâ subquadratâ, margine albo, profundo, plicâ suturali prominenti.*

DORMEYER'S PUPA. Shell cylindrical, turbinated, horny, smooth; whorls nine, apical small, following upper wide, lower gradually narrowed, last deeply creased; aperture subquadrate, margin white, deep, sutural plait prominent.

PARREYS — ?

Hab. Greece.

Species 190. (Mus. Hanley.)

PUPA TRICOLOR. *Pup. testâ pruinosa, subpyramidatâ, laevi, apice fusco, acuminato; anfractibus octonis, converisculis, tribus inferioribus altis; ultimo profundè rinato, umbilicato, infusâ umbilicella curvato; aperturâ subovatâ, margine fuscâ, interrupto, plicâ suturali conspicuâ; plicis internis utrinque duabus.*

THE THREE-COLOURED PUPA. Shell plum-coloured, subpyramidal, smooth, apex brown, acuminate; whorls eight, rather convex, three lower high; last deeply creased, umbilicated, keeled

below the umbilicus, aperture subovate, margin fulvous, interrupted, sutural plait conspicuous, inner plaits two on each side.

VILLA. — ?

Hab. Lombardy.

Species 191. (Mus. Hanley.)

PUPA FUSCA. *Pup. testâ minutâ, breviter cylindricâ, fusâ, tenaciter liratâ, anfractibus senis converis, laminis internis tenuibus, numerosis, plicâ suturali proximâ, albâ, elongatâ.*

THE BROWN PUPA. Shell minute, shortly cylindrical, brown, with thin ridges; whorls six, convex; inner lamina thin, numerous, sutural plait approximate, white, elongated.

LOWE, De Paiva Mon. Moll. p. 130.

Hab. Madeira.

Species 192. (Mus. Hanley.)

PUPA FALLAX. *Pup. testâ oblongo-ovatâ, fusâ, laevi, subacuminatâ; anfractibus senis; aperturâ ovatâ, edentulâ.*

THE DECEPTIVE PUPA. Shell oblong-ovate, brown, smooth, a little acuminate; whorls six; aperture ovate, toothless.

SAY, Pfr. Mon. Hel. II. p. 309.

Bolinus exiguus. Reeve.

Hab. N. America.

Species 32. (Fig. 32,* Plate XX. Mus. Brit.)

PUPA ANGlica. *Pup. testâ minutâ, cornâ, subpyramidatâ, laevi; anfractibus senis; aperturâ subtrigoniâ, latis plicatâ, margine albo, labio externo supra medianâ sinuatâ incrassatâ; plicâ suturali parvâ.*

THE ANGlicAN PUPA. Shell minute, horny, somewhat pyramidal, smooth; whorls six; aperture sub-trigonal, plaited within, margin white, outer lip sinuously thickened above the middle; sutural plait small.

FERRUSSAC — ?

Hab. Britain and other parts of Europe.

Errata.—For SEPTIDENTATUS (Species 118), read RINGENS, Sowerby.

For VARIABILIS (Species 32), read MULTIDENTATA, Olivier.

Pupa *Lapidaria* and Pupa *Variabilis* having been inadvertently repeated, the two following species take their numbers.

Species 152. (Fig. 152,* Plate XX., Mus. Brit.)

PUPA PYGMAEA. *Pup. testâ minutâ, brevissimè cylindricâ, ventricosâ, laevi; anfractibus quaternis aut quinis; aperturâ subovatâ, margine albo sedentato.*

THE PYGMY PUPA. Shell minute, very shortly cylindrical, ventricose, smooth; whorls four or five; aperture subovate, margin white, six-toothed.

DEAPARNAUD. 'Tab. des Mollusques de France.'

Pupa quinque-dentata. Hartman.

Vertigo alpestris. Ferrussac.

Hab. Britain and Central Europe.

PUPA.

	Plate.	Species.		Plate.	Species.
<i>acutula</i> , <i>Parreys</i>	XIII.	115	<i>conica</i> , <i>Rossmüller</i>	XI.	101
<i>alpicola</i> , <i>Charpentier</i>	XII.	107	<i>contracta</i> , <i>Gulman</i>	VIII.	67
<i>alvearea</i> , <i>Dilleya</i>	III.	23	<i>coronata</i> , <i>Stüder</i>	XI.	102
<i>aneonostoma</i> , <i>Loew</i>	XII.	108	<i>corticaria</i> , <i>Say</i>	XII.	106
<i>anglica</i> , <i>Ferrussac</i>	XX.	32*	<i>critica</i> , <i>Zellius</i>	XI.	102
<i>angustior</i> , <i>Jeffreys</i>	XIX.	175	<i>crassilabris</i> , <i>Shuttleworth</i>	II.	14
<i>antivertigo</i> , <i>Draparnaud</i>	XX.	183	<i>eupa</i> , <i>Küster</i>	XVII.	161
<i>Antonii</i> , <i>Küster</i>	II.	9	<i>curta</i> , <i>Potiez</i>	V.	44
<i>Arigonis</i> , <i>Rossmüller</i>	XI.	97	<i>curvidens</i> , <i>Gould</i>	XV.	140
<i>armifera</i> , <i>Say</i>	XV.	138	<i>cyclostoma</i> , <i>Küster</i>	XIX.	179
<i>avanica</i> , <i>Benson</i>	VII.	60	<i>cylindrelloidea</i> , <i>Stolckea</i>	VII.	64
<i>arena</i> , <i>Draparnaud</i>	VIII.	70	<i>cylindrellus</i> , <i>Adams</i>	XIII.	122
<i>arenacea</i> , <i>Brugnière</i>	VIII.	70	<i>cylindrica</i> , <i>Stüder</i>	IV.	25
<i>baillus</i> , <i>Pfeiffer</i>	IX.	80	<i>dealbata</i> , <i>Webbs</i>	VI.	52
<i>Bailla</i> (muscorum)	IX.	77	<i>decora</i> , <i>Gould</i>	XVIII.	165
<i>Barchi</i> , <i>H. Adams</i>	XVI.	146	<i>deshayesi</i> , <i>Poey</i>	II.	11
<i>batyodon</i> , <i>Benson</i>	IV.	33	<i>Deshayesi</i> , <i>Adams</i> ?	XX.	188
<i>Bergerii</i> , <i>Rothman</i>	V.	37	<i>Desmazuresi</i> , <i>Crosse</i>	X.	91
<i>biellus</i> ? <i>Irw.</i>	X.	87	<i>detrita</i> , <i>Shuttleworth</i>	III.	17
<i>bicolor</i> , <i>Hutton</i>	XVI.	148	<i>doliolum</i> , <i>Brugnière</i>	XI.	102
<i>bidentata</i> , <i>Pfeiffer</i>	IX.	77	<i>doliolum</i> , <i>Draparnaud</i>	VII.	55
<i>bifilaris</i> , <i>Mousson</i>	X.	90	<i>Dormeyeri</i> , <i>Parreys</i> ?	XX.	189
<i>bigranata</i> , <i>Rossmüller</i>	XVII.	159	<i>Dupontiana</i> , <i>Crosse</i>	VIII.	71
<i>biplicata</i> , <i>Rossmüller</i>	XIII.	130	<i>Dussumieri</i> , <i>Reeve</i>	IX.	84
<i>Blanfordii</i> , <i>Austria</i>	IV.	30	<i>edentula</i> , <i>Draparnaud</i>	XVIII.	172
<i>Borealis</i> , <i>Morelet</i>	XVII.	155	<i>elata</i> , <i>Schmidt</i>	V.	39
<i>Bongnignati</i> , <i>Deshayes</i>	XIV.	128	<i>elegantula</i> , <i>Pfeiffer</i>	XIX.	174
<i>Bryanti</i> , <i>Pfeiffer</i>	I.	1	<i>ceigna</i> , <i>Mousson</i>	VIII.	69
<i>calathiscus</i> , <i>Loew</i>	XIII.	121	<i>ceigna</i> , <i>Reeve</i>	XX.	192
<i>callifera</i> , <i>Morelet</i>	IX.	78	<i>Fabrana</i> , <i>Crosse</i>	IX.	85
<i>capitata</i> , <i>Gould</i> ?	XIX.	177	<i>fallax</i> , <i>Say</i>	XX.	192
<i>carinata</i> , <i>Gould</i>	VIII.	66	<i>Faulensis</i> , <i>Loew</i>	XII.	108
<i>caspia</i> , <i>Pfeiffer</i>	XI.	95	<i>farinesii</i> , <i>Desmarest</i>	XVII.	157
<i>cassida</i> , <i>Loew</i>	XV.	137	<i>fartoides</i> , <i>Theobald</i>	IV.	26
<i>cernica</i> , <i>A. Adams</i>	XVI.	149	<i>ferraria</i> , <i>Loew</i>	XV.	134
<i>Ceylonica</i> , <i>Pfeiffer</i>	XVI.	145	<i>Ferrarii</i> , <i>Porro</i>	XIV.	130
<i>Charpentieri</i> , <i>Shuttleworth</i>	XII.	109	<i>filosa</i> , <i>Theobald</i>	VII.	59
<i>Chloris</i> , <i>Crosse</i>	VIII.	73	<i>fonticola</i> , <i>Deshayes</i>	XIX.	182
<i>chrysalis</i> , <i>Pfeiffer</i>	I.	5	<i>frumentum</i> , <i>Draparnaud</i>	V.	44
<i>clavatula</i> , <i>Lunarek</i>	IX.	82	<i>faniela</i> , <i>Valenciennes</i>	XIX.	178
<i>concomerata</i> , <i>Wood</i>	V.	41	<i>fartoides</i> , <i>Theobald</i>	IV.	26
<i>concinna</i> , <i>Loew</i>	XV.	139	<i>fusca</i> , <i>Loew</i>	XX.	191

PUPA.

	Plate.	Species.		Plate.	Species.
<i>fusus</i> , Bruguière	III.	23	<i>molita</i> , Gould	XVI.	148
<i>glans</i> , Küster	I.	2	<i>Mondrainii</i> , Adams	XIV.	127
<i>Gonidomus</i> , Adams	V.	38	<i>monticola</i> , Loew	XVIII.	168
<i>Gouldii</i> , Binney	XII.	105	<i>Moricandi</i> , Fer	VIII.	65
<i>granum</i> , Draparnaud	XVII.	156	<i>Modliana</i> , Dapuy	XII.	109
<i>gularis</i> , Rossmäslcr	VI.	46	<i>Muhlfeldti</i> , Küster	VIII.	68
<i>guttula</i> , Porro	XIII.	130	<i>multicostata</i> , Küster	II.	13
<i>humata</i> , Held	XIX.	175	<i>multidentata</i> , Olivier	V.	42
<i>holostoma</i> , Morelet	IX.	83	<i>mumia</i> , Bruguière	I.	3
<i>hordeum</i> , Ferrussac	VIII.	70	<i>munola</i> ? Pfeiffer	I.	3
<i>idolum</i> , Mentze	V.	41	<i>muscerda</i> , Benson	VII.	56
<i>incrassata</i> , Sowerby	I.	6	<i>muscorum</i> , Linnaeus	IX.	77
<i>indica</i> , Pfeiffer	VII.	63	<i>mutabilis</i> , Ferrussac	V.	42
<i>infanda</i> , Shuttleworth	II.	11	<i>Newtoni</i> , Adams	VI.	51
<i>intersecta</i> , Deshayes	XIV.	129	<i>niso</i> , Pfeiffer	VI.	53
<i>istoma</i> , Pfeiffer	III.	22	<i>nitens</i> , Perse	XVII.	162
<i>irrigua</i> , Loew	XVIII.	171	<i>nitida</i> , Antonelli	XVII.	154
<i>juniperi</i> , Fleming	IV.	25	<i>Novazelandica</i> , Pfeiffer	XIV.	126
<i>Kokielii</i> , Rossmäslcr	VIII.	65	<i>nucifraga</i> , Parreys	X.	93
<i>Kurrii</i> , Krauss	XIX.	182	<i>oblongata</i> , Rossmäslcr	XII.	111
<i>Küsteri</i> , Pfeiffer	XIX.	179	<i>obscura</i> , Muhlfeldt	VIII.	68
<i>lachryma</i> , Auct.	XIX.	180	<i>obstructa</i> , Gussies	IV.	34
<i>Layardi</i> , Benson	XV.	141	<i>oculodentata</i> , Hartman	XX.	183
<i>lapidaria</i> (pygmaea)	XX.	152	<i>ovularis</i> , Olivier	XIII.	117
<i>lapidaria</i> , Hutton	XVI.	147	<i>pachygastra</i> , Zeigler	XII.	111
<i>Lienardiana</i> , Crosse	X.	94	<i>pagoda</i> , Ferrussac	V.	41
<i>Lieversi</i> , Mousson	IV.	29	<i>pagodula</i> , Desmarest	XI.	98
<i>Lifouana</i> , Gussies	IV.	28	<i>Paitensis</i> , Crosse	X.	88
<i>Lincolncnsis</i> , Coz	XI.	104	<i>palanga</i> , Lesson	VI.	43
<i>longurio</i> , Crosse	XI.	96	<i>palaugula</i> , Ferrussac	XIX.	181
<i>Lusitanica</i> , Rossmäslcr	XII.	113	<i>pamphorodon</i> , Benson	XIII.	120
<i>Lyonetii</i> , Montfort	IX.	81	<i>pellucida</i> , Pfeiffer	XII.	110
<i>Lyonetianus</i> , Pfeiffer	IX.	81	<i>pentodon</i> , Say	XV.	140
<i>Marginata</i> , Draparnaud	IX.	77	<i>phasianus</i> , Dubois	IV.	27
<i>Marici</i> , Crosse	IV.	31	<i>Philippii</i> , Cantraine	VIII.	69
<i>maritima</i> , Pfeiffer	III.	20	<i>Pirreci</i> , Pfeiffer	XVI.	143
<i>marmorata</i> , Pfeiffer	II.	10	<i>plangucula</i> , Benson	VII.	57
<i>Martensii</i> , Weibold	II.	15	<i>Planti</i> , Pfeiffer	XVIII.	169
<i>Martiniana</i> , Küster	II.	16	<i>plicidens</i> , Benson	XVI.	151
<i>megachilos</i> , Albers	XI.	97	<i>polyodon</i> , Draparnaud	X.	92
<i>Menkeana</i> , Pfeiffer	XIX.	176	<i>Pottebergensis</i> , Krauss	XVIII.	166
<i>metablitia</i> , Crosse	VIII.	71	<i>procera</i> , Gould	VII.	66
<i>microstoma</i> , Pfeiffer	II.	8	<i>producta</i> , Adams	XIII.	119
<i>microtragus</i> , Parreys	V.	35	<i>proteus</i> , Gnüllach	I.	4
<i>millium</i> , Gould	XVIII.	164	<i>pupula</i> , Deshayes	XIV.	132
<i>minula</i> , Benson	VII.	61	<i>pusilla</i> , Müller	XX.	186
<i>minutissima</i> , Hartman	XVIII.	163	<i>pygmaea</i> , Draparnaud	XX.	152*
<i>modesta</i> , A. Adams	XII.	114	<i>quadrideus</i> , Müller	V.	40
<i>modiolus</i> , Ferrussac	VI.	54	<i>quinquedentata</i> , Born	VI.	49
<i>modica</i> , Gould	XX.	184	<i>quinqueplumellata</i> , Risso	V.	43

PUPA

	Plate	Species	Color	Species	
<i>quinquepunctata</i> , Mühlfeldt	VIII.	68	<i>spinosa</i> , Ferrussac	XI.	102
<i>ularis</i> , Rossmäslér	VI.	46	<i>spretta</i> , Reers	VI.	50
<i>Raymondi</i> , Bourgainville	X.	87	<i>stenophyllis</i> , Benson	XIV.	125
<i>neglecta</i> , L.	XVIII.	167	<i>Strangeli</i> , Pfeiffer	XI.	100
<i>rhodina</i> , P. & F.	XIII.	115	<i>striatella</i> , Ferrussac	III.	18
<i>ringens</i> , Sowerby	XIII.	118	<i>striaticostata</i> , Morelet	XIII.	120
<i>ringiola</i> , Michaud	X.	92	<i>substriata</i> , Gray	XX.	183
<i>Rodriguezensis</i> , Crosse	VIII.	72	<i>sulcata</i> , Bruguère	V.	38
<i>Rossmäsléri</i> , Schmidt	XIV.	124	<i>tamilla</i> , Gould	XIX.	173
<i>Rowellii</i> , Newcomb	XVII.	160	<i>Tappaniana</i> , Mard.	XV.	140
<i>rubicundula</i> , Mentse	III.	23	<i>terce</i> , Pfeiffer	XIX.	181
<i>radis</i> , Pfeiffer	III.	21	<i>tricolor</i> , Villa—?	XX.	190
<i>rupestris</i> , Philippi	XI.	103	<i>tricuspis</i> , Rossmäslér	V.	36
<i>rupicola</i> , Say	IX.	75	<i>tridens</i> , Müller	VI.	47
<i>Rüsi</i> , Adams	XII.	110	<i>truncatella</i> , Pfeiffer	XVII.	158
<i>Sagraiana</i> , Pfeiffer	III.	19	<i>tumida</i>	I.	6
<i>Salamanensis</i> , Blanford	VII.	62	<i>turgidula</i> , Deshayes	XIV.	133
<i>Salwiniana</i> , Theobald	XVI.	150	<i>undulicincta</i> , De Paiva	XII.	108
<i>Saulceyi</i> , Bourgainville	X.	86	<i>unidentata</i> , Pfeiffer	IX.	77
<i>saxicola</i> , Loze	XVIII.	170	<i>ava</i> , Linnaeus	I.	7
<i>scalarina</i> , Guallach	XVII.	153	<i>avula</i> , Deshayes	XIII.	116
<i>scapus</i> , P.	X.	87	<i>vara</i> , Benson	XVI.	144
<i>sculpta</i> , Benson	VII.	58	<i>variabilis</i> , Draparnaud	V.	42
<i>secale</i> , Draparnaud	IV.	25	<i>variabilis</i> (multidentata)	XII.	112
<i>seductilis</i> , Zeigler	VI.	53	<i>Venetzi</i> , Charpentier	XIX.	175
<i>septidentata</i> , Rothman	VI.	45	<i>ventricosa</i> , Adams	XIV.	131
<i>septidentata</i> (ringens)	XIII.	118	<i>ventrosa</i> , Heynem	XII.	109
<i>sericea</i> , Gould	XII.	110	<i>versipellis</i> , Ferrussac	IX.	79
<i>Shuttleworthii</i> , Albers	XV.	142	<i>vertigo</i> , Draparnaud	XX.	186
<i>Sieversi</i> , Mousson	IV.	29	<i>Villa</i> , Charpentier	XI.	99
<i>signata</i> , Mousson	X.	89	<i>villosula</i> , Kokiél	XI.	102
<i>similis</i> , Bruguère	V.	43	<i>vineta</i> , L.	XV.	135
<i>simplex</i> , Gould	IX.	76	<i>Walbergi</i> , Pfeiffer	XX.	187
<i>sinuata</i> , M.	VIII.	74	<i>Weinlandi</i> , Kurr	III.	24
<i>sphinctostoma</i> , Loze	XV.	136	<i>Zebra</i> , Weinland	II.	12

MONOGRAPH
OF THE GENUS
VANIKORO.

“ Nature, enchanting Nature, in whose form
And lineaments divine I trace a hand
That errs not.”—*Cooper*.



1 a



2



3



4 b



5



6



7



8 a



9 a b



10 b

VANIKORO.

PLATE I.

Genus VANIKORO, Quoy et Gaimard.

Testa subglobosa, plerumque alba, cancellata vel decessata, epidermide tenui induta, perforata, umbilicata, umbilico in canalē desinenti; margine aperturæ simplici. Operculum coracum unguiculatum, non-spirale.

Shell subglobose, generally white, cancellated or decessated, covered with a thin epidermis, perforated, umbilicus ending in a canal; margin of the aperture simple. Operculum horny, unguiculate, non-spiral.

Synonyma. MERULA, Gray. WANICA, Recluz.

The greater part of the species now known were described by Recluz in the Proceedings of the Zoological Society for 1843, many of them being from specimens in the late Mr. Cuming's collection. A few species have been subsequently discovered. The home of the genus seems to be the Pacific, particularly southwards.

Species 1. (Fig. a, b, Mus. Brit.)

VANIKORO CANCELLATA. *Van. testâ latâ, patulâ, crassiusculâ, costis concentricis obliquis, sublanatis, extantibus et liris tenuibus spiralibus cancellatâ; aperturâ latâ, columellâ arcuatâ, canali angustato, elongatâ; spirâ brevissimâ, depressâ, epidermide croceâ.*

THE CANCELLATED VANIKORO. Shell broad patulate, rather thick, cancellated with oblique, rather laminar outstanding concentric ribs and thin spiral ridges; aperture broad, columella arched, canal narrow, elongated; spire very short, depressed; epidermis saffron.

QUOY et GAIMARD, Voyage de l'Astrolabe.

Narica Quoyi, Recluz.

Hab. Vanikoro, S. Pacific.

In this species the oblique ribs are rather laminated in form, and rise to angular ridges in the most prominent parts. The colour of the epidermis is bright saffron on the younger specimens.

Species 2. (Mus. Brit.)

VANIKORO GUERINIANA. *Van. testâ brevî, crassâ, latâ; costis distantibus, crassis, perobliquis, et striis spiralibus cancellatâ; aperturâ latâ, declivi; canali obliquè rectiusculâ, canali latâ, semilunari.*

GUERIN'S VANIKORO. Shell short, thick, broad, cancellated with distant, thick, very oblique ribs and spiral striae; aperture broad, sloped downwards; canal obliquely nearly straight, canal broad, semilunar.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. Isl. of Capul, Philippines.

The ribs are broad, thick, and distant.

Species 3. (Mus. Brit.)

VANIKORO Plicata. *Van. testâ globosâ, tenuiusculâ, costis mucronosis tenuibus et striis spiralibus sculptâ; apice subacuminatâ; canali semilunari; columellâ rectiusculâ.*

THE PLATED VANIKORO. Shell globose, rather thin, sculptured with numerous thin ribs and spiral striae; apex rather acuminate; canal semilunar; columella rather straight.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. Isl. Ticao.

Species 4. (Mus. Brit.)

VANIKORO Cidaris. *Van. testâ rotundâ, crassâ, costis latis, substantibus et striis spiralibus sculptâ; spirâ depressâ, acuminatâ; aperturâ magnâ, canali moderatè angustatâ, columellâ rectiusculâ.*

THE CIDARIS VANIKORO. Shell rounded, thick, sculptured with broad, rather distant ribs and spiral striae; spire depressed, acuminate; aperture large, canal moderately narrow, columella rather straight.

RECLUZ, Proc. Zool. Soc., 1843.

Hab. Isl. Masbate, Philippines.

May, 1875.

Species 5. (Mus. Brit.)

VANIKORO PETITIANA. *Van. testâ globosâ tenuisculâ, costis numerosis, concentricis versus marginem sub-crenatis et liris tenuibus, acutis, spiralibus sculptâ; spirâ acuminatâ, anfractibus rotundis, distinctis, ultimo maximo; canali angusto; aperturâ latâ.*

PETIT'S VANIKORO. Shell globose, rather thin, sculptured with numerous concentric ribs becoming obsolete towards the margin and thin, sharp spiral ridges; spire acuminated, whorls rounded, distinct, last very large; canal narrow; aperture broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Philippines.

Species 6. (Mus. Brit.)

VANIKORO LIGATA. *Van. testâ crassisculâ, globosâ, costis elevatis, obliquis, crassis, concentricis, liris tenuibus ligatis sculptâ; spirâ depressâ, canali angustissimo, columellâ arcuatâ.*

THE CONNECTED VANIKORO. Shell rather thick, globose, sculptured with raised, oblique, thick, concentric ribs united by thin spiral ridges; spire depressed, canal very narrow; columella arched.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Seychelles Islands.

Species 7. (Fig. a, b, Mus. Brit.)

VANIKORO CUMINGIANA. *Van. testâ depressâ, crassâ, angulatâ, carinis magnis spiralibus et striis foveolatis*

concentricis sculptâ; spirâ brevi, anfractibus minutis, angulatis; aperturâ subrotundâ; canali lato.

CUMING'S VANIKORO. Shell depressed, thick, narrow, sculptured with large spiral keels, and pitted concentric striae; spire short, whorls minute, angular; aperture rather rounded; canal broad.

RECLUZ. Proc. Zool. Soc., 1843.

Narica tricarinata, Recluz.

Hab. — ?

The *Narica tricarinata* appears to be only a depressed variety.

Species 8. (Fig. a, b, Mus. Brit.)

VANIKORO RUGATA. *Van. testâ elevatâ, crassâ, spirâ acuminatâ anfractibus, superioribus crassi-costatis, interstitiis profundè foveolatis, ultimo anfractu leviter sculpto; aperturâ semilunari; canali lato, columellâ verticillatâ.*

THE WRINKLED VANIKORO. Shell elevated, thick, spire acuminated, upper whorls thick-ribbed, with deeply pitted interstices; last whorl lightly sculptured, aperture semilunar; canal broad, columella rather straight.

A. ADAMS. MS. Cum. Coll.

Hab. — ?

The cancellations of the upper whorls are very deeply pitted, but they become almost obsolete towards the back and margin of the last whorl.



Fig. 11



Fig. 12



Fig. 13



Fig. 14



Fig. 15



Fig. 16



Fig. 17



Fig. 18



Fig. 19



Fig. 20

VANIKORO.

PLATE II.

Species 9. (Mus. Brit.)

VANIKORO GAIMARD. *Van. testâ parvâ, costis paucis, distantibus spiritalibus et liris concentricis profundi et latè cancellatâ; spirâ elevatâ, acuminatâ; aperturâ subrotundâ; canali angustâ, profundo.*

GAIMARD'S VANIKORO. Shell small, deeply and broadly cancellated with few distant spiral ribs and concentric ridges; spire elevated, acuminate; aperture rather rounded; canal narrow, deep.

ADAMS. MS. Cuml. Coll.

Vanikoro Quoyi, Adams, non Recluz.

Hab. — ?

Species 10. (Fig. a, b, Mus. Brit.)

VANIKORO CUVIERIANA. *Van. testâ subpatulâ, depressâ, tenui, tenuiter spiritaliter et concentricè livatâ; spirâ depressâ, acuminatâ, anfractu ultimo superius subdepresso; aperturâ obliquè ovatâ, canali latissimo, columellâ tenui, obliquè subarcuatâ.*

CUVIER'S VANIKORO. Shell rather patulate, depressed, thin, finely spirally and concentrically ridged; spire depressed, acuminate, last whorl rather depressed above; aperture obliquely ovate, canal very broad, columella thin, a little obliquely arched.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. — ?

A more finely sculptured shell than most of the other species.

Species 11. (Mus. Brit.)

VANIKORO SOULEYLIANA. *Van. testâ globosâ, tenuiter spiritaliter et concentricè sculptâ; spirâ parvâ, acuminatâ, ultimo anfractu rotundo; aperturâ subrotundâ; columellâ rectâ, canali brevi, angustâ.*

SOULEYET'S VANIKORO. Shell globose, finely spirally and concentrically sculptured; spire small,

acuminate, last whorl rounded; aperture rather rounded; columella straight, canal short, narrow.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. — ?

Originally described from a specimen in Mr. Cuming's collection—locality unknown.

Species 12. (Fig. a, b, Mus. Brit.)

VANIKORO DESHAYESIANA. *Van. testâ globosâ, tenui, spirâ acuminatâ; anfractibus superioribus cancellatis, ultimo anfractu tenuiter spiritaliter striatâ, leviter concentricè costatâ; costis striisque versus marginem ferè crenatis; aperturâ subrotundâ, columellâ leviter arcuatâ; canali latiusculo.*

DESHAYES' VANIKORO. Shell globose, thin, spire acuminate; upper whorls cancellated, last whorl finely spirally striated, lightly concentrically ribbed; ribs and striae almost obsolete towards the margin; aperture rather rounded, columella slightly arched; canal rather broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Isl. Zebu, Philippines.

In some specimens the sculpture almost disappears towards the back of the last whorl.

Species 13. (Fig. a, b, Mus. Brit.)

VANIKORO DISTANS. *Van. testâ parvâ, clatâ, distantissimè concentricè costatâ, spiritaliter tenuiter striatâ; spirâ elevatâ, acuminatâ; aperturâ semilunari, obliquâ; canali lato, semilunari.*

THE DISTANT VANIKORO. Shell small, elevated, very distantly concentrically ribbed, spirally finely striated; spire elevated, acuminate; aperture semilunar, oblique; canal broad, semilunar.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Isl. Bohol, Philippines.

May, 1875.

VANIKORO.—PLATE II.

Species 14. (Mus. Brit.)

VANIKORO CLATHRATA. *Van. testâ rotundo-subdepressâ ; crassi, subequaliter cancellatâ ; aperturâ obliquâ ; columellâ rectiâsculâ, canali latissimo ; spirâ acuminatâ, profundè foveolatâ.*

THE LATTICED VANIKORO. Shell roundly sub-depressed, thick, rather equally cancellated; aperture oblique; columella rather straight, canal very broad; spire acuminate, deeply pitted.

RECLUZ. Proc. Zool. Soc., 1843.

Natica stricta, D'Orbigny.

Natica margaritacea, Potiez.

Natica sigaretiformis, Potiez.

Hab. —?

Species 15. (Mus. Brit.)

VANIKORO ROSEA. *Van. testâ parvâ, patulâ, rosâ, striis spirâlibus et costis concentricis obliquis cancellatâ ; aperturâ semilunari, columellâ rectiâsculâ ; canali latissimo.*

THE PINK VANIKORO. Shell small, patulous, pink, cancellated with spiral striae and concentric oblique ribs; aperture semilunar, columella rather straight; canal very broad.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. Moluccas.

The only species showing any genuine colour in the shell itself.

Species 16. (Mus. Brit.)

VANIKORO GRANULOSA. *Van. testâ globosâ, costis spirâlibus moniliformibus sculptâ ; spirâ elevatâ ; aperturâ semilunari ; columellâ tenui ; canali latissimo, complanato.*

THE GRANULATED VANIKORO. Shell globose, sculptured with beaded spiral ribs; spire elevated; aperture semilunar; columella thin; canal very broad, flat.

RECLUZ. Proc. Zool. Soc., 1843.

Hab. New Holland.

The spiral sculpture decidedly predominates in this species in the form of beaded ribs.



17



18 a



18 b



19



a



b

20

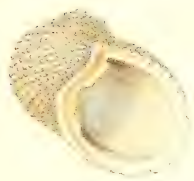


a



b

21



Neritopsis



22



23



a



b

24

VANIKORO AND NERITOPSIS.

PLATE III.

Species 17. (Mus. Brit.)

VANIKORO IMBRICATA. *Van. testâ parvâ, tenui, obliquâ, tenuiter spirâliter et concentricè striatâ; spirâ elevatâ, acuminatâ; aperturâ angustè ovatâ, obliquè productâ, canali mazimo, semitruvdo.*

THE IMBRICATED VANIKORO. Shell small, thin, oblique, finely spirally and concentrically striated; spire raised, acuminated; aperture narrowly ovate, obliquely produced, canal very large, half-rounded.

PEASE MS.

Hab. Islands in the Pacific.

Species 18. (Fig. a, b, Mus. Brit.)

VANIKORO RECLUZIANA. *Van. testâ elatâ, acuminatâ, spirâ cancellatâ, ultimo anfractu ferè levigatâ; aperturâ semicirculari, columellâ rectiusculâ; canali elongatâ, latiusculo.*

RECLUZ'S VANIKORO. Shell elevated, acuminated, spire cancellated, last whorl almost smooth; aperture semicircular, columella nearly straight; canal elongated, rather broad.

ADAMS AND ANGUS. *Proc. Zool. Soc.*, 1867. p. 212.

Hab. New South Wales.

The early whorls are strongly cancellated, but the body whorl becomes nearly smooth.

Species 19. (Mus. Brit.)

VANIKORO HELICOIDEA. *Van. testâ subrotundâ, eleganter costatâ, interstitiis spirâliter depresso-striatâ; spirâ depressâ; aperturâ magnâ, ovatâ; columellâ tenui, rectiusculâ; canali brevî, semilunari.*

THE SNAIL-SHAPED VANIKORO. Shell rather rounded, elegantly ribbed, interstices spirally depressed-striated; spire depressed; aperture large, ovate;

columella thin, rather straight; canal short, semilunar.

LE GUILLON. *Recluz, Proc. Zool. Soc.*, 1843.

Hab. — ?

Species 20. (Fig. a, b, Mus. Brit.)

VANIKORO SOLIDA. *Van. testâ solidâ, globosâ, spirâ prominenti, anfractibus superioribus cancellatis, rotundis, ultimo anfractu tenuiter spirâliter et concentricè striato; aperturâ magnâ, columellâ tortuâ; canali angustâ.*

THE SOLID VANIKORO. Shell solid, globose, spire prominent, upper whorls cancellated, rounded, last whorl finely spirally and concentrically striated; aperture large, columella tortuous, canal narrow.

SOWERBY.

Hab. — ?

Species 21. (Fig. a, b, Mus. Brit.)

VANIKORO ACUTA. *Van. testâ altiusculâ, tenui, semipellucidâ, tenuiter decussatâ; spirâ acuminatâ, anfractibus prominulis; aperturâ subovatâ, columellâ rectâ, canali lato, planulato.*

THE ACUTE VANIKORO. Shell rather elevated, thin, semipellucid, finely decussated; spire acuminated, whorls rather prominent; aperture subovate, columella straight, canal broad, flattened.

RECLUZ. *Proc. Zool. Soc.*, 1843.

Hab. — ?

More finely decussated than most of the species, with sharp spire and thin substance.

Species 22. (Mus. Brit.)

VANIKORO SEMIPLICATA. *Van. testâ globosâ, tenuiusculâ, tenuiter decussatâ; ultimo anfractu supra suturam aperturâ elevatâ; anfractibus apicalibus minutis;*

May, 1875.

aperturâ senarctundâ ; columellâ tenui, rectiusculâ ; canali elongato, angusto.

THE HALF-PLAITED VANIKORO. Shell globose, rather thin, finely decussated; last whorl raised above the suture of the aperture; apical whorls minute; aperture half-round; columella thin, rather straight; canal long, narrow.

PEASE —? MS. in Cuning's Collection.

Hab. South Seas

Species 23. (Mus. Brit.)

VANIKORO ELATA. *Van. testâ altâ, tenui, tenuissimâ decussatâ ; spirâ elevatâ, acuminatâ, anfractibus prominentibus ; aperturâ breviusculâ, subpyriformi ; columellâ brevi, leviter arcuatâ, canali brevi, angustissimo.*

THE ELEVATED VANIKORO. Shell elevated, thin, very finely decussated; spire elevated, acuminated, whorls prominent; aperture rather short, rather pyriform; columella short, slightly arched, canal short, very narrow.

SOWERBY.

Hab. China Seas.

Much more elevated than *Vanikoro acuta*, and with a narrow canal.

Species 24. (Fig. a, b, Mus. Brit.)

VANIKORO SEMISOLUTA. *Van. testâ altâ, angustâ, spirâliter costis moniliformibus, et concentricè striis tenuibus sculptâ ; spirâ elevatâ, acuminatâ ; ultimo anfractu suprâ suturam perelato ; aperturâ declivi, angustè auriformi, ad suturam vix convexâ, canali elongato, latiusculo.*

THE HALF-UNCOILED VANIKORO. Shell elevated, narrow, sculptured spirally with beaded ribs, and concentrically with thin striae; spire elevated, acuminated; last whorl raised high above the suture; aperture sloped downwards, narrowly auriform, scarcely connected at the suture, canal elongated, rather broad.

SOWERBY.

Hab. East Indies.

Owing to the fall of the aperture and the comparative distinctness of the canal, the outer and inner lips seem scarcely to touch the body-whorl.

NERITOPSIS.

Genus NERITOPSIS, *Gratchowpe.*

Testâ subglobosa, spirâliter granoso-costatâ ; spirâ brevi, aperturâ magna ; labio interno crasso, planilato, medio quadratim emarginato ; labio externo intus incrassato. Operculum crassum, testaceum, non spirale.

Shell subglobose, spirally granulately ribbed; spire short, aperture large; inner lip thick, flattened, with a square notch in the middle; outer lip thickened within. Operculum thick, shelly, not spiral.

Syn. RADULA, Gray, not Klein.

As yet the *Neritopsis radula* from the Pacific is the only recent species known, although there are many fossil ones. The operculum formerly unknown, and supposed to be thin and horny, has been recently

figured in the Zoological Proceedings and described by Mr. Henry Adams. It is thick and shelly, with a square projection to fit the notch in the columella of the shell.

Species. (Mus. Sowerby.)

NERITOPSIS RADULA. *Ner. testâ obliquè ovatâ, crassâ ; costis crassis moniliformibus spiratibus sculptâ ; interstitiis angustis, foveolatis ; aperturâ obliquâ, margine externo laevato.*

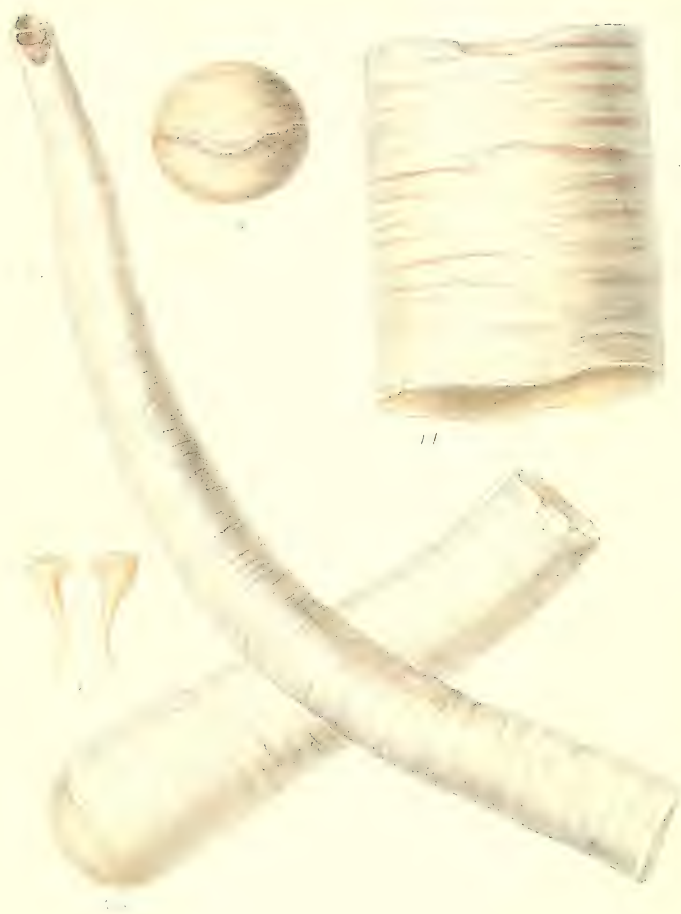
THE BOLT NERITOPSIS. Shell obliquely ovate, thick; sculptured with thick beaded, spiral ribs; interstices narrow, pitted; aperture oblique, outer margin fluted.

LINNEUS (*Nerita*). Syst. Nat.

Hab. Ceylon.

MONOGRAPH
OF THE GENUS
KUPHUS.

"All worlds, all nature, mood and measure keep
For praise and ceaseless gratulation poured
Into the ear of God—their Lord."—*Wordsworth.*



KUPHUS.

Genus KUPHUS, *Gutierrez* (Cyphus).

Mollusum arcuicolum. *Tuba magna alba, rugosa, subannulata, posticè attenuata, intus in tubis duabus divisa, laminis septiformibus transversis concamerata. Valvæ ignotæ. Paludis compressores testacei, deltoides.*

Mollusc, sand-burrowing. Tube large, white, rough, slightly ringed, posteriorly attenuated, divided interiorly into two tubes, chambered transversely with septiform laminae. Valves unknown, compressor paludets shelly, deltoide.

Syn. Furcella, *Oken.* Septaria, *Lamarck.*

The gigantic tube of this Mollusc in its anterior duplicate opening, its inner transverse septa, and its white, roughened, and irregularly annulated surface, is so exactly like a magnified representation of the tube of a *Teredo* as to leave little doubt as to the nature of the animal and its affinity with the genus *Teredo*. At the same time it can hardly be included in that genus, the valves having never been seen, and it being certain that the animal does not bore like the *Teredines*.

Species 1. (Mus. Brit.)

KUPHUS GIGANTEA. *Kup. testâ maximâ, tubâ elongatâ, rugosâ posticè attenuatâ, divisâ, anticè latè apertâ; valvulis et paludis compressoribus ignotis.*

THE GIGANTIC KUPHUS. Shell very large; tube elongated, rugose, posteriorly attenuated, divided, anteriorly broadly open; valves and compressor paludets unknown.

LINNAEUS (*Serpula*). *Systema Naturæ.*
Septaria arcuaria, *Lamarck.*

Although not yet discovered, there can be little doubt but that valves of some kind exist. It is only barely possible that they may become absorbed. The tube, of which fig. *b* represents the end portion, is about three and a half feet long.

Species 2. (Fig. *a, b, c*, Mus. Brit.)

KUPHUS CLAUSA. *Kup. testâ magnâ; tubâ tenuissimâ anticè divisi, attenuatâ, concameratâ; posticè margine edundatâ inflexo superlaminato clausâ; valvulis ignotis; paludis compressoribus testaceis, argutibus, anticè styliformibus, posticè deltoides.*

THE CLOSED KUPHUS. Shell large; tube rather thin, anteriorly divided, attenuated, chambered, posteriorly closed by the roundly-inflected, superlaminated margin; valves unknown; compressor paludets shelly, equal, anteriorly styliform, posteriorly deltoide.

SOWERBY.

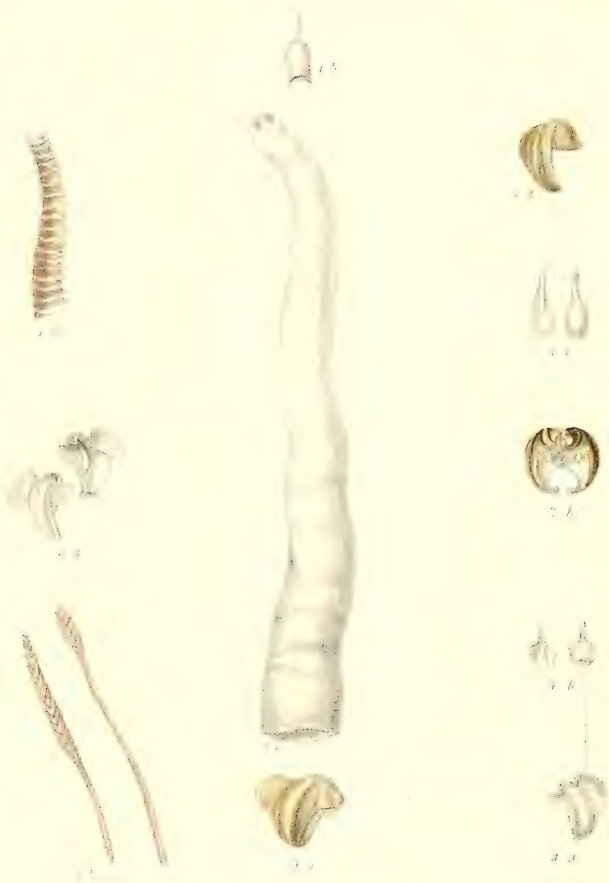
Hab. — ?

The end of the tube, which in the British Museum specimen is about fifteen inches long, is closed by the margin being folded inwards so as to meet and overlap across a rounded oval disc. If there were valves they would be enclosed within this termination. I do not know whether they have been sought in the specimen. The specimen in the British Museum is labelled as identical with the well-known *C. arcuaria*.

May, 1875.

MONOGRAPH
OF THE GENUS
T E R E D O.

"In nature's infinite book of secrecy,
A little I can read."—*Shakspeare*.



TEREDO.

PLATE I.

Genus TEREDO. *Linnaeus.*

Molluscorum vermiforme, perforans, tubum testaceum plerumque firmans, siphonibus stylorum corneorum vel palularum testacearum pari munitum. Testa globosa, aequaliter, antice angulariter, postice arcuatim hians; cardine callosa, utriusque processu subumbonali muniti. Tubi ad terminum siphonulorum luvialis septifloribus frequenter divisi.

Mollusc worm-shaped, perforating, generally forming a shelly tube; siphons provided with a pair of horny stylets or shelly pallets. Tube divided at the siphonal end by septiform laminae. Shell globose, equilateral, gaping angularly in front and in a curve behind; hinge callous, provided with a subumbonal process in each valve.

The habits of the Teredos are only too well known wherever they are found. The mischief they do in boring ship's timbers, and destroying breakwaters and piles, causes them to be reckoned among the enemies of industrial mankind. They generally bore in the direction of the grain of the wood, sometimes a little crookedly, but seldom intruding into each other's bores. The shelly tube forms the lining to the hole, and the valves are enclosed at the wider extremity. The pallets or stylets are attached near the ends of the siphons, and seem to be used for the purpose of compressing and relaxing them, so as to assist the circulation of the water through the lengthened tubes. The pallets in some species are shelly and spade-shape; in others horny and styliform. These divisions are separated generically by some authors as *TEREDO* and *XYLOPHAGA*.

Species 1. (Fig. *a, b*, only Mus. Brit.)

TEREDO NAVALIS. Ter. testâ obliquâ, subbilisculi; arcis antica tenuissimè striatis; sulco mediano lato, antice postice brevifidâ, auriculâ magna, robustâ; tubâ tenuissculâ, minimè cameratâ; palmaris testaceis, oblongis, termino concavo-arcuato; stipulâ brevi.

THE SHIP TEREDO. Shell oblique, rather solid, anterior areas very finely striated; middle sulcus ridged, posterior area smooth, auricle large, round; tube rather thin, not chambered; pallets shelly, oblong, end arched, stem short.

LINNEUS. Systema Naturæ.

Teredo navalis, Sellius.

Teredo fatalis, Quatrefages?

Hab. British coasts. Piles of Yarmouth Pier. Rainsgate.

Species 2. (Fig. 2, *a, b, c*; for tube, see Fig. 1, *c, d*, Mus. Brit.)

TEREDO NORVEGICA. Ter. testâ altissculâ, solidâ, valvâ arcuatâ; sulco mediano profundo; auriculâ angustâ, semicirculanti; palmaris testaceis, oblongis, termino concavo, lateribus declivibus, stipulâ brevissculâ; tubâ robustâ, cameratâ.

THE NORWEGIAN TEREDO. Shell rather high, solid, much arched; medial groove deep; auricle narrow, half-round; pallets shelly, oblong, with convex end, sloped sides, and rather short stem; tube robust, chambered.

SPENGLER. Forbes and Hanley, B. Mol. p. 66.

Teredo nigra, Blainville.

Teredo Brugnièri, Delle Chiaje.

Teredo fatalis et T. Doshii, Quatrefages.

Teredo auriana, Sellius.

Hab. British and Northern coasts.

The breadth of the valves, as compared with the height, is less in this species than in the preceding, and the posterior auricle is much narrower.

Species 3. (Fig. *a, b*, Mus. Brit.)

TEREDO BIPENNATA. Ter. testâ altâ, tenuiter striatâ, umbonibus callosis; auriculâ postice elevatâ, ad juncturam angustatâ, versus marginem lateralem expansâ, paulo supra umbonem elevatâ; stylis corneis, inæqualibus, articulatis; uno brevi, stipulâ elongatâ, altero elongato, stipulâ brevissculâ.

THE BIPENNATE TEREDO. Shell high, finely striated, umboes callous; posterior auricle raised, narrow

TEREDO.—PLATE I.

at the juncture, expanded towards the lateral margin, raised a little above the umbo; styles horny, unequal, jointed; one short, with long stem; the other long, with rather short stem.

TURTON. British Bivalves.

Hab. Ireland, Scarborough, &c.

Species 4. (Fig. a, b, Mus. Hanley.)

TEREDO MEGOTARA. *Ter. testā latā, rotundatā, arcū anticā breviusculā, margine dorsali reflexo, recurvo, concavo; auriculā posticā latā, elevatim expansā, supra umbones recurvā; palmentis testaceis, bre-*

vibus, subquadratis, stipulā brevi, crassiūsculā; tubā articulatā.

THE EXPANDED TEREDO. Shell broad, rounded, anterior area rather short, dorsal margin reflected, recurved, concave; posterior auricle broad, raised, expanded, recurved above the umboes; pallets shelly, short, rather square, stem short, rather thick; tube jointed.

HANLEY. Forbes and Hanley, Brit. Moll.

Teredo dilatata. Stimpson.

Teredo nana? Turton.

Teredo oceanī? Sellius.

Hab. Herne Bay, Devonshire, Swansea.



TEREDO.

PLATE II.

Fig. 1. *d.* Small end of the tube of *Teredo borealis*, showing that it is not chambered. To replace the figure in Plate I.

Fig. 2. *d.* Chambered end of *TEREDO NORVEGICA*.

Species 5. (Fig. *a, b, c*, Mus. Brit.)

TEREDO SCUTICIBERI. *Ter. testā brevī, rotundā; arcuā anticiā parvā, obtusā, auriculā posticiā parvā, rotundā; processū subumbonali expanso, calidē curvato; stylis cornicis, minute articulatīs, lateribus tenerrē spinosis; stipulā curvā, tenui.*

STICHURBY'S TEREDO. Shell short, rounded; anterior area small, obtuse; posterior auricle small, rounded; subumbonal process expanded, strongly curved; stylets horny, minutely articulated, finely spined at the sides; stem curved, thin.

LEACH. MS. Mus. Brit.

Hab. Samatra.

Species 6. (Fig. *a, b, c*, Mus. Brit.)

TEREDO CARINATA. *Ter. testā altissimā, valdē arcuatā; auriculā anticiā expansā, elevatā, intus valdissimē crenatā; stylis cornicis, elongatis, tenuibus, stipulā elongatissimā.*

THE KEELER TEREDO. Shell rather high, much arched; anterior auricle expanded, raised, very strongly keeled, stylets horny, long, narrow, stem very long.

GRAY. MS. in Brit. Mus.

Hab. Drift-wood in British Channel.

The stylets of *Teredo bipinnata* are unequal, one being short, wheat-ear-like, with very long stem, and the other a much longer body with shorter stem. The stylets of *Teredo carinata* seem to differ from both. The valves in the latter are perhaps broader, but the difference is not very certain or obvious.

Species 7. (Fig. *a, b, c*, Mus. Brit.)

TEREDO MALLEOLUS. *Ter. testā parvā, altā, obliquā, angustā, valdissimē arcuatā, arcū postici brevis, angustū, versus umbonem recurvā, elevatū; processū umbonali obliquē curvā, ad terminum elevatū; paludis brevissimis, testaceis, latis, stipulā brevī, incurvā.*

THE LITTLE HAMMER TEREDO. Shell small, high, oblique, narrow, very strongly arched; posterior

area short, narrow, recurved towards the umbo, raised; umbonal process obliquely curved, club-shaped at the end; pallets very short, shelly, broad, with short stem, bent forwards.

TERTON. Forbes and Hanley. Brit. Moll.

Hab. Torquay.

Species 8. (Fig. *a, b*, Mus. Brit.)

TEREDO MEGATHORAX. *Ter. testā magnā, solidā, rotundā, anticiā latissimā hiantē, calidē arcuatā, umbonibus rotundis, auriculā posticiā brevī, rotundā, marginē dorsali paulo elevato; arcu anticiā brevī, arcu medianis elongatis, callo terminali magnō; processū subumbonali lato.*

THE BIG-CHESTED TEREDO. Shell large, solid, rounded, anteriorly very widely gaping, strongly arched, umbones rounded, posterior auricle short, rounded, dorsal margin a little raised; anterior area short, median areas elongated, with large terminal callus; subumbonal process broad.

GOULD — ? MS. Mus. Brit.

Hab. N. America.

Species 9. (Fig. *a, b, c*, Mus. Brit.)

TEREDO CAMPANULATA. *Ter. testā altā, latissimā, arcū postico-centrali latā, sulco mediani lato, lirato; auriculā posticiā ad juncturam angustatā, versus marginem lateralem latē expansā, superne concavo-arcuatim elevata, margine laterali declivi; stylis cornicis, elongatis, dimidiatim articulis campanuliformibus utriusque recurvo-spinosis ornatis.*

THE CAMPANULATED TEREDO. Shell white, rather broad, posterior-central area broad, middle sulcus broad, ridged; posterior auricle narrowed at the juncture, broadly expanded towards the lateral margin, raised in a concave curve above, lateral margin sloped downwards; stylets horny, elongated, ornamented half-way with bell-shaped joints, having recurved spines on each side.

DESHAYES. MS. Mus. Brit.

Hab. — ?

The valves resemble those of *Teredo bipinnata*, but are much shorter and broader in the continuation of the central areas below the auricle. The greater difference is in the ornamentation of the pallets.



TEREDO.

PLATE III.

Species 10. (Fig. *a, b, c, d*, Mus. Brit.)

TEREDO SAULII. *Ter. testā subrotundā, parvā, arcuā anticiā cuneatā; auriculā posticiā subrotundā, elongatā, margine dorsali declivi, ad juncturam inferiorem moderatē angulatā, arcis centralibus infra auriculam brevissimis, processu subumbonali ad terminum capitulo; tubi solidiusculi, monanquam clavati; stylis coracis, angulatum pinnatis, stipulā brevi.*

SALT'S TEREDO. Shell rather round, small, anterior area cuneated; posterior auricle half-round, elongated, dorsal margin sloped, moderately angular at the lower juncture; central arcs rather short below the auricle; subumbonal process expanded at the end; tube rather solid, sometimes closed; stylets horny, angularly pinnated; stem short.

WEIGHT. MS. Mus. Brit.

Hab. Callas Bay.

Species 11. (Fig. *a, b, c*, Mus. Jeffreys.)

TEREDO PERCILLATA. *Ter. testā parvā, altiusculā; arcū anticiā breviusculā, auriculā posticiā prominenti, rotundā; palmaris testaceis, medio quasi-articulatis, termino convexo-arcuato; stipulā coracē, longā; tubi tenui, septis terminalibus parvis.*

THE PERCILL TEREDO. Shell small, rather high; anterior area rather short, posterior auricle prominent, rounded; pallets shelly, quasi-articulated in the middle, concavely arched; stem horny, long; tube thin, with few terminal septa.

QUATEMAN'S. Ann. Nat. Sci. Ser. 3. t. 11. p. 26.

Hab. Coasts of Great Britain.

The valves resemble those of *Teredo palmulata*, but the kind of horny joint by which the pallets seem to be divided into two portions shows the distinctness of the species.

Species 12. (Fig. *a, b, c*, Mus. Brit.)

TEREDO BATANUS. *Ter. testā brevi, rotundā, crassā; auriculā posticiā angustā, margine dorsali declivi; arcū anticiā brevi, obtusā; umbonibus callosis, incurvis; processu subumbonali curvo, expanso; tuberculo terminali nunguo; palmaris testaceis, spatulatis, latis, ad latera concavis, ad terminum coracis; stipulā elongatā.*

THE BATAVIAN TEREDO. Shell short, rounded, thick; posterior auricle narrow, dorsal margin sloped; anterior area short, obtuse; umbones callous, curved inwards; subumbonal process curved, expanded; terminal tubercle large; pallets shelly, spatulate, broad, convex at the sides, concave at the end; stipula elongated.

SPENCER — ? Fid. Mus. Brit.

Hab. Batavia.

This species has been assigned to *Teredo muralis* by some authors, but the valves, as well as the pallets, are very different in form.

Species 13. (Fig. *a, b, c*, Mus. Deshayes.)

TEREDO APUSIS. *Ter. testā parvā, globosā, lirate-striatā; arcū anticiā brevi, angustā; arcū posticiā mediā; tubi tenui; auriculā posticiā latā, elongatā, arcuatā plicatā; hiatus postico parvo; processu subumbonali tenuissimo, brevi; palmaris minimis, angustis, compressis; superiō coracis, quadripartitis; stipulā elongatā.*

THE ALLIED TEREDO. Shell small, globose, ridgestriated; anterior area short, narrow; postero-medial area broad; posterior auricle broad, long, plaited in curves; posterior hiatus small; subumbonal process very thin and rather short; pallets very small, narrow, compressed; horny and quadripartite above; stem elongated.

DESHAYES. Conch. Isl. Bourbon. Pl. XXVIII. Fig. 8-12.

Hab. Ile de la Réunion (Bourbon).

TEREDO.—PLATE III.

Species 14. (Fig. a, b, c, Mus. Deshayes.)

TEREDO BREVIS. *Ter. testâ parvâ, alidâ, binauriculâ, utroque latere valdè aperto, arcibus distinctis, auriculâ granoso-striatis; auriculâ posticâ lula, eleganterrimè et plicatâ; processu subumbonali brevissimo; palmulis elongatis, articulatis, articulis septem vel octo, infundibuliformibus, gradatim decrescentibus, spinâ coriaceâ utroque latere armatis.*

THE SHORT TEREDO. Shell small, high, rather thin,

widely gaping on both sides; arcs distinct, anterior granularly striated; posterior auricle broad, elegantly thin and plaited; subumbonal process very short. Pallels elongated, jointed, joints seven or eight, funnel-shaped, gradually decreasing, armed on each side with a coriaceous spine.

DESHAYES. *Conch. Isl. Bourbon*, Pl. 28, Fig. 4-7.

Hab. Ile de la Réunion (Bourbon).



TEREDO.

PLATE IV.

Species 15. (Fig. *a, b, c*, Mus. Brit.)

TEREDO PALMULATA. *Ter. testā parvā, rotundā; auriculā postici et areā antici productis, rotundis, areis centralibus latis, brevissimis; processu sub-ambonali curvo, crispato. Stylis corneis, brevibus, spiniformibus, stipulā longitudine aequali.*

THE PALMULATED TEREDO. Shell small, rounded, posterior auricle and anterior area produced, rounded; central areas broad, rather short; sub-ambonal process curved, expanded. Styles horny, short wheat-ear-shaped, stem of equal length.

LAMARCK. Anim. sans. Vert.

Teredo minima, Blainville.

Teredo bipalmata, Dele. Clujie.

Teredo Philippii, Fisher.

Hab. Ireland, England, &c. In floating wood.

Species 16. (Fig. *a, b, c*, Mus. Brit.)

TEREDO SENGALENSIS. *Ter. testā parvā; tubū rugosā, versus terminum siphonalem attenuatū; palmulis breviter spatulatis, callosa bicarinatis; stipulā brevissimā.*

THE SENEGAL TEREDO. Shell small; tube rough, attenuated towards the siphonal end; pallets shortly spatulate, bicarinated outside, with very short stem.

BLAINVILLE.

Hab. Senegal coasts.

Tubes in wood, and pallets which seem quite distinct in their characters from any other species, are in the British Museum, without any specimens of the valves. The species is referred to *Teredo Norvegica* by Jeffreys.

Species 17. (Fig. *a, b, c*, Mus. Brit. and Sowb.)

TEREDO NUCIVORA. *Ter. testā altā, angustissimā, tenui, utrinque latissimē apertā; tubū contortū, crassā, bulbiformi.*

THE NUT-EATING TEREDO. Shell high, very narrow, thin, very widely gaping on both sides; tube contorted, thick, bulb-shaped.

SPENGLER. Desh. Traité d'ém. Pl. 2, Fig. 9, 10.

Genus *Uperotia*, Guettard.

Guettaria nucivora, Gray.

Pistulana gregata, Lamarck.

Teredo gregata, Sowerby.

Hab. Isl. of France.

This species pierces its way through the shells of floating cocoa-nuts, and forms its contorted bottle-shaped tubes in the interior. Several tubes are often found twisted together, and a specimen in the British Museum shows a mass of them coiled round each other in the very heart of a nut. The writer has not met with specimens of the pallets, but the valves are narrow and much curved.

Species 18. (Fig. *a, b, c*, Mus. Brit.)

TEREDO DENTICULATA. *Ter. testā brevi, rotundā, solidā; areā antici brevissimā; auriculā postici elongatā, crispatā, supra angustatā, versus ambonem incurvā; areis medianis latis, infra auriculam brevibus; ambonibus callosis, denticulo spiniformi minutis; palmulis subovatis, ad latera vix denticulatis, supra dentes denticibus, stipulā brevissimā.*

THE DENTICULATED TEREDO. Shell short, round, solid; anterior area very short; posterior auricle elongated, expanded, narrow above, curved inwards towards the umbo; middle areas broad, short below the auricles; umbos callous, provided with a spine-shaped denticle; pallets subovate, with a tooth at the sides, sloped above the teeth, stem very short.

Gray, MS. Brit. Mus.

Hab. Britain?

Species 19. (Fig. *a, b, c*, Mus. Brit.)

TEREDO DUNLOPI. *Ter. testā brevi, crassā, globosā, stiliis multiformibus sculptā; ambonibus curvis.*

TEREDO.—PLATE IV.

callosis, intus lamellâ accessorîâ instructâ; processu subumbonali valdè arcuato, lato; areâ anticâ subquadratâ, areâ antico-centrali latissimâ; sulco mediano angusto, profundo, areâ postico-centrali angustissimâ; auriculâ posticâ extus vix distinctâ, intus laminâ notatâ; palmulis semicorneis, oblongis, uno latere converis, altero planis, ad terminum bifurcatis, stipulâ breviusculâ.

DUNLOP'S TEREDO. Shell short, thick, globose, sculptured with beaded striae; umboes curved, callous, fitted inside with an accessory plate; subumbonal process much arched, broad; anterior area subquadrate, anterior-central area very broad; medial sulcus narrow, deep; posterior-central area very narrow; posterior auricle scarcely distinguished on the outside, marked

within by a lamina: pallets half horny, oblong, convex on one side, flat on the other, two-forked at the end, stem rather short.

WRIGHT. Trans. Linn. Soc. 1864.

Naucitorâ Dunlopi. Wright.

Hab. River Como, Bengal.

The river Como flows from and returns to the river Ganges. Just on the bend Mr. Dunlop resided for some time, and the Teredos of this new species were found to have perforated some wood which had been cut down on the spot and left to float. The water of the river itself and of that part of the Ganges whence it flows is perfectly fresh, and the water, being remarkably soft, is used for drinking and all culinary purposes. We have here, therefore, a fresh-water Tere-
do.

MONOGRAPH
OF THE GENUS
PEDICULARIA.

"God is great and right!

He crowned man's brow with radiant orbs of light

* * * * *

To read His works God thus illumed the head.

But made man's breast no window to be read."—*N. T. Moth.*



PEDICULARIA.

Genus PEDICULARIA, *Swainson*.

Testa ovata, irregularis, patula, paucispiralis, radiatim costata; spira subcalata, minuta; apertura maxima; columella planulata, rectiuscula, labio externo frequenter lobato.

Shell ovate, irregular, patulate, few-whorled, radiately ribbed; spire nearly hidden, minute; aperture very large, columella flattened, rather straight, outer lip frequently lobed.

The Messrs. Adams state in their work on Genera that the only known species is the one found parasitically attached to Mediterranean corals. But M. Deshayes in describing *Pedicularia elegantissima*, in his shells of Bourbon, speaks as if there were many other species, but does not refer to or describe them. The only species, besides the two above named, with which I am acquainted, is the *Pedicularia Pacifica*, described by Pease.

It is somewhat uncertain to what family the curious little shells composing this genus belong. On one hand they have been thought to have some affinity with the *Cypræda*, as there are indications of a mantle reflected over the lips, although not reaching the central region of the back. On the other hand, the shell would be most easily likened to a miniature *Concholapas* with irregularly extended margins.

Species 1. (Figs. *a, b, c, d, e*, Mus. Sowerby.)

PEDICULARIA SICULA. *Ped. testâ crassâ, valdè irregulari; albâ, fulvâ, vel roseâ suffusâ; radiatim et divaricatim costatâ, costis minutè moniliformibus, lobis peraruncque profundè lobatis, columellâ rectiusculâ.*

THE SICILIAN PEDICULARIA. Shell thick, very irregular; white, fulvous, or suffused with pink; radiately and divergently ribbed, ribs very minutely

beaded, lips generally deeply lobed; columella rather straight.

SWAINSON, Conchological Illustrations.

Hab. Found on small corals in the Mediterranean.

Species 2. (Fig. *a, b, c*, Mus. Sowerby.)

PEDICULARIA PACIFICA. *Ped. testâ tenuiusculâ, oblongâ, irregulari, in medio contractâ, radiatim striis elevatis minutissimis ornata, striis concentricis decussati, apice conspicuo, involuto; rubidâ, interdum omnino violaceâ vel cornâ.*

THE PACIFIC PEDICULARIA. Shell rather thin, oblong, irregular, contracted in the middle, ornamented with very fine raised elevated radiating striae; decussated with concentric striae, apex conspicuous, involute; reddish, sometimes violet all over, or horny.

PEASE. Proc. Zool. Soc., 1865, p. 516.

Hab. Pacific Islands.

Species 3. (Fig. *a, b*, Mus. Maillart.)

PEDICULARIA ELEGANTISSIMA. *Ped. testâ oboato-oblongâ, valdè convexâ, purpurâ, radiatim costatâ, costis majoribus moniliformibus, minoribus interstitiâibus lævibus; aperturâ angustâ, utraqûe extremitate paulò depressâ, spirâ partim calatâ.*

THE ELEGANT PEDICULARIA. Shell ovate-oblong, purple, radiately ribbed; larger ribs beaded, smaller interstitial ones smooth; aperture narrow, a little depressed at each end; spire partly hidden.

DESHAYES. Isle de la Réunion, p. 20, Pl. XXXIII.

Hab. Isl. Bourbon.

May, 1875.

MONOGRAPH
OF THE GENUS
MYTELMERIA.

" But life did never to one man allow
Time to discover worlds and conquer too;
Nor can so short a line sufficient be,
To fathom the vast depths of nature's sea." *Coleridge.*



MYTILIMERIA.

PLATE I.

Genus MYTILIMERIA, Conrad.

Testa bivalvis, binuseulosa, tenuis, subaequalis, valde inequilateralis, epidermide induta. Umbones spirales, subdistanter. Cardio edentulo; cartilagine partim in foveam instructa, lamina testacea libera obrecta.

Shell bivalve, with two muscles, thin, subequal, very inequilateral, covered with an epidermis. Umbones spiral, rather distant. Hinge without teeth, with a cartilage placed partly in a hollow, partly covered by a free testaceous plate.

The type of this genus is the rounded oval shell named *M. Nuttalli* by Conrad. The specimens in the British Museum are odd valves, the shelly plates of which are missing. The subsequently discovered large shell from Vancouver's Island, which has been described as *Lyonsia saxicola* by Dr. Baird, is fairly well adjudged to belong to this genus, and has the ossicle well developed.

Species 1. (Mus. Brit.)

MYTILIMERIA NUTTALLI. *Myt. testâ rotundè ovatâ, tenui, albâ; umbonibus terminalibus, distantibus, validè spiralibus; latere postico expanso, terminibus truncatis.*

NUTTALL'S MYTILIMERIA. Shell roundly ovate, thin, white; umbones terminal, distant, very spiral; posterior side expanded, ends truncated.

CONRAD. Amer. Journ. Sci.

Hab. California.

The cartilage is placed in a narrow spiral groove running from the umbo, and where it comes to the hinge line it is enlarged.

Species 2. (Mus. Brit.)

MYTILIMERIA DIAPHANA. *Myt. testâ semipellucida, oblongâ, arcuatâ, linguiformi, subcomplanatâ, super aream posticam taniis fuscis plurimus radiatâ;*

umbonibus elevatis, ferè terminalibus; latere postico ad terminum latè truncato; margine dorsali arcuatim depresso.

THE DIAPHANOUS MYTILIMERIA. Shell semitransparent, oblong, curved, tongue-shaped, rather flattened, rayed on the posterior area with several brown bands; umbones raised, nearly terminal; posterior side broadly truncated; dorsal margin depressed with a curve.

CARPENTER (*Lyonsia*). Proc. Zool. Soc., 1855.

Hab. California.

Species 3. (Mus. Brit.)

MYTILIMERIA Plicata. *Myt. testâ parvâ, levigatâ, cuneatâ; anticè sinuatim plicatâ, posticè expansâ; umbonibus acutis, ferè terminalibus; latere antico brevissimo, acuminato, margine ventrali profundè sinuato; latere postico alato, infri marginem dorsalem depresso, margine ventrali inflato.*

THE Plicated MYTILIMERIA. Shell small, smooth, wedge-shaped, anteriorly sinuously plicated, posteriorly expanded; umbones acute, nearly terminal; anterior side very short, acuminate; ventral margin deeply sinuated; posterior side alated, depressed below the dorsal margin, ventral margin inflated.

GRAY. MS. Brit. Mus.

Hab. — ?

Species 4. (Mus. Brit.)

MYTILIMERIA SAXICOLA. *Myt. testâ magnâ, ventricosâ, oblongâ, epidermide valido, corneo-indutâ, ad margines ventralem et terminalem hianti; latere antico brevi, angustâ; latere postico elongato, ventricoso, ad terminum truncato; valvâ dextrâ planiusculâ valvâ sinistrâ profundè ventricosâ; margine dorsali depresso, arcuato; lamina cardinali magnâ, crassâ, extus convexâ.*

May, 1875.

MYTILIMERIA.—PLATE I.

THE ROCK-DWELLING MYTILIMERIA. Shell large, ventricose, oblong, covered with a strong, horny epidermis, gaping at the ventral and terminal margins; anterior side short, narrow; posterior side elongated, ventricose, truncated at the end; right valve rather flat; left valve deeply ventricose; dorsal margin depressed, curved; hinge plate large, thick, convex outside.

BAIRD (*Lyonsia*). Boundary Commission Report.

Hab. Vancouver's Island.

It has been found difficult to fix the generic status of this fine shell, which differs greatly in form and habit from the typical *Lyonsia*.

Species 5. (Mus. Brit.)

MYTILIMERIA NAVICULA. *Myt. testâ oblongâ, tenui, pallidâ, inflatâ; umbonibus tumidis, fere terminalibus; latere antico brevissimo, perpendiculariter truncato; margine ventrali antice sinuato, hianti, posticè inflato; latere postico oblongo, obliquè angulato, ad terminum truncato; margine dorsali depresso, rectiusculo; valvâ dextrâ profunda.*

THE BOAT MYTILIMERIA. Shell oblong, thin, pale, inflated; umboes tumid, almost terminal; anterior side very short, perpendicularly truncated; ventral margin anteriorly sinuated, gaping, posteriorly inflated; posterior side oblong, obliquely angular, truncated at the end; dorsal margin depressed, rather straight; left valve deep.

ADAMS AND REEVE (*Lyonsia*). *Proc. Zool. Soc.*, 1836, p. 70.

Hab. Iquiqui, Peru.

Species 6. (Mus. Brit.)

MYTILIMERIA PICTA. *Myt. testâ subrhomboidâ, solidâ, lineis fuscis divaricatis pictâ, ad marginem ventralen latissimè hianti; umbonibus terminalibus; latere antico brevissimo subtruncato; latere postico expanso lato; valvâ sinistrâ ventricossimâ; lamina cardinali complanatâ.*

THE PAINTED MYTILIMERIA. Shell somewhat rhomboidal, solid, painted with divergent brown lines, very broadly gaping at the ventral margin; umboes terminal; anterior side very short, rather truncated; posterior side expanded, broad; left valve very ventricose; hinge plate flat.

SOWERBY (*Lyonsia*). *Proc. Zool. Soc.*, 1834, p. 88.

Hab. Vancouver's Island.

Species 7. (Mus. Brit.)

MYTILIMERIA CUNEATA. *Myt. testâ tenui, palidâ, antice inflatâ, posticè attenuatâ, complanatâ, latere postico brevi, truncato; umbonibus elevatis acuminatis; margine dorsali rectiusculo, ventrali medio anticeque inflato.*

THE WEDGE MYTILIMERIA. Shell thin, pale, inflated anteriorly, posteriorly attenuated, flattened; posterior side short, truncated; umboes elevated, acuminate; dorsal margin rather straight, ventral in the middle and anterior side inflated.

GRAY. *MS. Brit. Mus.*

Hab. —?

MONOGRAPH
OF THE GENUS
SAXICAVA.

"For wonderful are all His Works,
Pleasant to know, and worthiest to be all
Had in remembrance always with delight."—*Milton*.



SAXICAVA.

PLATE I.

Genus SAXICAVA, *Flauriau de Bellevue*.

Testa oblonga, equicalcis, rugosa, ad marginem ventralem hians. Cardio aetate juniore minutè bidentatus, aetate majore edentulus. Impressiones vasculares distantes; impressione pallii posticè latè sinuati.

Shell equivalve, rugose, gaping at the ventral margin. Hinge in a young state bidentate, when full-grown without teeth. Muscular impressions distant; impression of the mantle broadly sinuated posteriorly.

Srs. *Byssomya*, Cuvier. *Hiatella*, Daudin.

The *Saxicavae* are rock-burrowing mollusca. They are found fixed in small hollows, often in the deserted holes of the *Pholas*. To the inner wall of the hole they attach themselves by a byssus, and often in the after growth of their valves become conformed to its shape. The young shells differ in two respects from the older form. They have small cardinal teeth which disappear when the animal is adult, and they have spines on the posterior angles, which also disappear. In this younger state they represent the genus *Hiatella* of Daudin. The arctic seas, the Mediterranean, and the Cape produce most of the few species known.

Species 1. (Mus. Brit.)

SAXICAVA ARCTICA. *Sax. testâ oblongâ, rugosâ, crassâ, aetate juniore posticè spiniferâ, cardine bidentato, aetate seniori cardine edentulo; latere antico angusto, brevi, margine ventrali sinuoso, umbonibus depressis, anticis; latere postico latiori, quadrato, biangulato, latè truncato.*

THE ARCTIC SAXICAVA. Shell oblong, rugose, thick; posteriorly spiniferous when young, with two teeth on the hinge; without teeth on the hinge when adult; anterior side narrow, short; ventral margin sinuous; umbones depressed, anterior; posterior side broader, square, biangular, broadly truncated.

LINNEUS. *Systema Naturæ*.

Hiatella arctica, Lamarek.

Solen minutus, Linneus.

Hiatella minuta, Turton.

Donax rhomboides, Deshayes.

Hab. Arctic regions, British and North American coasts.

Species 2. Mus. — ? (copied.)

SAXICAVA PETITIL. *Sax. testâ subcuneiformi, subregulariter rugatâ; latere antico brevi, angusto, margine ventrali profundè sinuato, latè hianti; latere postico expanso, rotundatum obliquè angulato, post angulum latè, obliquè truncato; margine dorsali recto.*

PETIT'S SAXICAVA. Shell rather cuneiform, rather regularly wrinkled; anterior side short, narrow; ventral margin deeply sinuous, broadly gaping; posterior side expanded, roundly, obliquely angular, broadly obliquely truncated behind the angle; dorsal margin straight.

DESHAYES. MS. Mus. Cuv. in Brit.

Hab. — ?

The wrinkles in this species are regular and sharp.

Species 3. (Mus. Brit.)

SAXICAVA RUGOSA. *Sax. testâ tenuiusculâ, rhomboidè, lævigatâ, posticè viz angulatâ, leviter rugatâ, margine dorsali subarcuato; latere antico brevissimo.*

THE RUGOSE SAXICAVA. Shell rather thin, rhomboidal, smooth, posteriorly scarcely angular, slightly wrinkled; dorsal margin a little arched; anterior side very short.

LINNEUS (*Mytilus*). *Systema Naturæ*.

Saxicava Gallicana, Lamarek.

Mya Byssifera, Fabricius.

May, 1875.

Hab. British Islands.—France.

More smoothly rounded and less sharply angular than *Saxicava arctica*, with more convex ventral and dorsal margins.

Species 4. (Mus. Brit.)

SAXICAVA SULCATA. *Sax. testâ crassâ, subcuneatâ, concentricè undis magnis profundiusculis rugatâ; latere antico angusto, producto, subacuminato; umbonibus elevatis, margine ventrali profundè excavato; latere postico lato, rotundatim angulato, margine ventrali convexo, margine dorsali depresso, margine terminali truncato.*

THE GROOVED SAXICAVA. Shell thick, rather euneate, concentrically wrinkled in large waves; anterior side narrow, produced, rather acuminate; umboes elevated, ventral margin deeply excavated; posterior side broad, roundly angular; ventral margin convex; dorsal margin depressed; terminal margin truncated.

DESHAYES —? MS. Mus. Brit.

Hab. Clyde.

The writer is uncertain respecting the authority for this species, which certainly seems distinct from any known forms of *S. arctica*, or *S. rugosa*. It is represented in the British Museum by an odd valve from the Clyde.

Species 5. (Mus. Brit.)

SAXICAVA PHOLADIS. *Sax. testâ elongatâ, submytiliformi, concentricè validè rugatâ; latere antico brevissimo, angustiusculo; latere postico magnis expanso, elongato, obliquè angulato, margine dorsali recto; margine terminali latè truncato; margine ventrali convexo.*

THE PHOLAS-LIKE SAXICAVA. Shell elongated, rather mytilus-shaped, concentrically strongly wrinkled, anterior side very short, rather narrow; posterior

side more expanded, elongated, obliquely angular; dorsal margin straight; terminal margin broadly truncated; ventral margin convex.

LAMARCK. *Anim. s. Vertèbres.*

Hab. Greenland.

It is quite an open question whether this may not be one of the numerous forms of *Saxicava rugosa*.

Species 6. (Mus. Brit.)

SAXICAVA SOLIDA. *Sax. testâ crassâ, rhomboideâ, inæquivalvi; valvâ dextrâ profundâ, ad umbonem multò valvâ sinistram altitudine superanti; latere antico brevissimo, declivi, umbonibus ferè terminalibus; latere postico biangulato, angulis obliquis, moniliformibus, margine terminali perpendiculariter truncato.*

THE SOLID SAXICAVA. Shell thick, rhomboidal, inæquivalve; right valve deep, much higher than left at the umbo; anterior side very short, sloped, umboes nearly terminal; posterior side biangular, angles oblique, moniliform; terminal margin perpendicularly truncated.

SOWERBY. *Proc. Zool. Soc., 1834.*

Hab. —?

A very solid shell with two posterior keeled and partly beaded angles.

Species 7. (Mus. Brit.)

SAXICAVA FLACCIDA. *Sax. testâ parvâ, subovatâ, tenuiusculâ, terminis rotundis, umbonibus magnis, ferè terminalibus; margine ventrali medio subexcavato.*

THE FLACCID SAXICAVA. Shell small, rather oval, rather thin; ends rounded, umboes large, nearly terminal; ventral margin a little excavated in the middle.

GOULD. *United States Exploring Expedition?*

Hab. North America.



7a



8a



8c



9



1



10



11



12



13



14

SAXICAVA.

PLATE II.

Species 8. (Figs. a, b, c, d, Mus. Brit.)

SAXICAVA AUSTRALIS. *Sax. testâ oblongâ, valdè rugosâ, plurimiusculè distortâ; umbonibus magnis, perlevis, ferè terminalibus; latere postico obliquè producto, angulato, ad angulum obsolete spinoso, margine ventrali ad terminum sursum acclivis, margine terminali obliquè truncato, margine dorsali recti, areâ complanati.*

THE AUSTRALIAN SAXICAVA. Shell oblong, very rugose, more or less distorted; umboes large, much elevated, nearly terminal; posterior side obliquely produced, angular, obsolete spinose at the angle, ventral margin sloped upwards at the end, terminal margin obliquely truncated, dorsal margin straight with a flattened area.

LAMARCK. *Anim. sans Vert.*, v. p. 153.

Saxicava distorta, Say.

Mastra crassa, Peron.

Hab. Australia—(var.) United States.

More tumid, especially towards the umboes, than *Saxicava arctica*. The younger specimens have spines on the angle, as in that species, but these are worn off as the shell becomes larger, leaving tubercles in their places. The right valve is frequently deeper and higher at the umboes than the left. The American type (fig. d) corresponds with the Australian and not with the British form.

Species 9. (Mus. Brit.)

SAXICAVA TENDIS. *Sax. testâ rhomboidi, elongatâ, tenui, subinflatâ; latere antico brevissimo, declivi; umbonibus elevatis, acutis, ferè terminalibus; latere postico subattenuato, obliquè acutè angulato; angulo subseriato.*

THE THIN SAXICAVA. Shell rhomboidal, elongated, thin, rather inflated; anterior side very short, sloped; umboes raised, sharp, nearly terminal; posterior side rather attenuated, obliquely sharply angular; angle a little serrated.

SOWERBY. *Proc. Zool. Soc.*, 1834, p. 88.

Hab. — ?

Species 10. (Mus. Brit.)

SAXICAVA GUERINII. *Sax. testâ oblongâ, angustâ, rectiusculâ; latere antico brevi, obliquè declivi, infriè subangulatâ; latere postico elongato, ad terminum obtusè truncato; margine ventrali rectiusculo, medio excavato.*

GUERIN'S SAXICAVA. Shell oblong, narrow, rather straight; anterior side short, obliquely sloped, a little angular below; posterior side elongated, obtusely truncated at the end; ventral margin rather straight, excavated in the middle.

PATRUDEAU. *Mollusca.* Plate I.

Hab. Mediterranean Sea.

Species 11. (Mus. Brit.)

SAXICAVA ANGASII. *Sax. testâ irregulariter rhomboidi, magnâ, solidâ, altâ, subinaequivalvi, valdè inaequaliter, flavido-rubescenti, fusco nebulatâ; valvâ dextrâ altiusculâ, profundiorâ; latere antico brevissimo, declivi; latere postico obliquè angulato, oblongo, ad terminum quadrato.*

ANGAS'S SAXICAVA. Shell irregularly rhomboidal, large, solid, elevated, rather inequivalve, very inequilateral, reddish yellow clouded with brown; right valve rather the higher and deeper; anterior side very short, sloped; posterior side obliquely angular, oblong, square at the end.

A. ADAMS. *Proc. Zool. Soc.*, 1865, 643.

Hab. St. Vincent's Gulf, S. Australia.

The only species exhibiting anything like distinct colouring, excepting *Saxicava purpurascens*.

Species 12. (Mus. Brit.)

SAXICAVA SPINIFERA. *Sax. testâ parvâ, levigatâ, supernè quadratâ, infriè bilobatâ; latere antico brevissimo, umbonibus terminalibus, margine ventrali profundè excavato; latere postico lato, truncato, margine dorsali et angulo obliquè decurrentibus spinis acutis prominentibus ornatis.*

SAXICAVA.—PLATE II.

THE SPINIFEROUS SAXICAVA. Shell small, smooth, square above, two-lobed below; anterior side very short, umboes terminal, ventral margin deeply excavated; posterior side broad, truncated, dorsal margin and obliquely decurrent angle ornamented with sharp prominent spines.

SOWERBY.

Hab. Savannah Bay.

The young of *Saxicava arctica*, *rugosa*, and *Australis* are spinose on the dorsal margin and posterior angle, but no specimen of either has been found with spines so prominent, or similar to this in other characters.

Species 13. (Mus. Deshayes? copied.)

SAXICAVA SIMILIS. *Sax. testâ cuneiformi, oblongâ, radiatim striatâ, posticâ biangulatâ, ad angulos carinis subspiniferis duabus munitâ; valvâ dextrâ majori, ventricosâ, valvâ sinistrâ planiusculâ; latere antico angusto, brevissimo; umbonibus terminalibus; latere postico expanso, ad terminum late truncato.*

THE SIMILAR SAXICAVA. Shell cuneiform, oblong, radiately striated, posteriorly biangular, strengthened at the angles by two subspiniferous keels; right valve the larger, ventricose, left

valve rather flatter; anterior side narrow, very short; umboes terminal; posterior side expanded, broadly truncated at the end.

DESHAYES. Mollusques de l'Isle de la Réunion.

Hab. Isl. Bourbon.

M. Deshayes likens this little species to *Saxicava arctica*, from which it differs in being radiately striated and in the keel-like ridges on the angles.

Species 14. (Mus. Brit.)

SAXICAVA PURPURASCENS. *Sax. testâ elongatâ, angustâ, rectâ, concentricè rugatâ; latere antico brevissimo, umbonibus prominentibus terminalibus; latere postico purpureo suffuso, elongato, obliquè angulato; ad angulum et infrâ marginem dorsalem rugoso, carinato.*

THE PURPLISH SAXICAVA. Shell elongated, narrow, straight, concentrically wrinkled; anterior side very short, umboes prominent, terminal; posterior side suffused with purple, elongated, obliquely angular; with a wrinkled keel on the angle, and below the dorsal margin.

SOWERBY. Proc. Zool. Soc., 1834, p. 88.

Hab. —?

Pupina



PUPINIDÆ

PLATE I.

Fam. PUPINIDÆ. (A. ADAMS.)

Animal terrestres. Testa pupiformis, operculum corneum, multispinale.

Genus PUPINA. Vignard. *Testa brevis, nonnunquam nitens; aperturâ bicanaliculâtâ. Sp. 1—34, 29 omisâ.*

Genus HARGREAVESIA. Adams. *Testa brevis; aperturâ ad suturam uni-canaliculâtâ. Sp. 29.*

Genus CALLIA. Gray. *Testa brevis, nitens, umbilico clauso, aperturâ margine integro. Sp. 35—38.*

Genus REGISTOMA. Hasselt. *Testa nitens; aperturâ margine infra columellam rimatâ. Sp. 39—47.*

Genus CATAULUS. Pfeiffer. *Testa pyramidalis, perforatâ, ultimo anfractu infusâ carinato, aperturâ margine externo ad carinam productâ. Sp. 48—65.*

Genus ARINIA. Adams. Sp. 66.

Genus POLLICARIA. Adams. *Umbilico fere clauso, aperturâ margine intero integro. Sp. 67—92.*

Genus RAPHAULUS. Pfeiffer. *Aperturâ superne labiâ*

Animal terrestrial, shell pupa-shaped, operculum horny; multispinal. Sp. 1—34.

PUPINA. Shell short, sometimes shining; aperture with two channels. Sp. 1—34. Omit 39.

HARGREAVESIA. Shell short; aperture with a channel at the suture. Sp. 39.

CALLIA. Shell short, shining; umbilicus closed; aperture with the margin entire.

REGISTOMA. Shell shining; aperture with the margin notched under the columella. Sp. 39—47.

CATAULUS. Shell pyramidal, perforated, last whorl keeled below, aperture with outer edge produced at the keel. Sp. 48—65.

ARINIA. Sp. 66.

POLLICARIA and MEGALOMASTOMA. Umbilicus nearly closed, inner margin of the aperture entire. Sp. 67—92.

RAPHAULUS. Upper part of aperture provided with a tube.

The *Pupinidæ* do not affect northern climates, but abound in India, Australia, also in the Pacific and other islands.

Species 1. (Mus. Sowerby. Pupina.)

PUPINA BILINGUIS. *Pup. testâ allâ, fuleâ, pupiformi, apice obtuso; anfractibus quinque, superioribus*

brevis, penultimo alto, ultimo inflato, subgloboso; aperturâ parvâ, circulari, canalibus duobus, ad suturam uno, infra columellam altero, oblique oblongis, arcuatis, in lunares linguiformes productis.

THE DOUBLE-TONGUED PUPINA. Shell raised, fulvous, pupa-shaped, with obtuse apex; whorls five, upper short, penultimate high, last inflated, rather globose; aperture small, circular, with two canals, one at the suture, the other below the columella, obliquely oblong, curved, produced in two callous linguiform ridges.

PFEIFFER. Proc. Zool. Soc. Thes. Conch. *Pupinidæ*, Pupina. Fig. 8, 9, 10.

Hab. East Australia.

The channels on the upper and lower part of the aperture are prolonged in two curved tongue-shaped callosities.

Species 2. (Mus. Sowerby.)

PUPINA VENTROSA. *Pup. testâ ventricosâ, semipellucidâ, breviter subpyramidalâ; ultimo anfractu subgloboso; aperturâ oblique ovatâ, antice productâ, labio interno arcuato; canalibus duobus calloso-marginatis, breviter arcuatis productis.*

THE INFLATED PUPINA. Shell ventricose, semi-pellucid, shortly rather pyramidal; last whorl rather globose; aperture obliquely ovate, anteriorly produced, inner lip arched; two callus-edged canals shortly arched, produced.

DOHER. Adams. Sowb. Thes. *Pupinidæ*. Pupina. Fig. 12, 13.

Hab. Cape York.

Species 3. (Mus. Sowerby.)

PUPINA ARTATA. *Pup. testâ ovatâ, albâ vel fuleâ, breviter pupiformi, apice obtuso; anfractibus quinque, superioribus brevis, ultimo inflato, subgloboso; aperturâ parvâ, circulari, canalibus duobus, oblique elongatis, conspicuè callo-marginatis, arcuatis.*

THE JOINTED PUPINA. Shell ovate, white or fulvous, shortly pupa-shaped; apex obtuse; whorls five, upper short, last inflated, subglobose; aperture small, circular, canals two, obliquely elongated, conspicuously callus-edged, curved.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidæ*, Pupina. Fig. 1, 2.

Hab. Moulmein, India.

Species 4. (Mus. —? Copied.)

PUPINA GRANDIS. *Pup. testā magnā, ventricosā, pupaeformi, fuscā, solidā, apice obtuso; anfractibus septem, superioribus brevibus, penultimo inflato, ultimo alto, inflato; aperturā parvā, circulari, margine aurantio, crassissimo, latissimo, profundē bicanaliculato.*

THE LARGE PUPINA. Shell large, ventricose, pupa-shaped, brown, solid, with obtuse apex; whorls seven, upper short, last but one inflated, last high, inflated; aperture small, circular; margin orange, very thick, very broad, with two deep canals.

FORD'S. Adams. Sowb. Thes. *Pupinidæ*, Pupina, Fig. 20.

Hab. Louisiade Archipelago.

Species 5. (Mus. Hanley.)

PUPINA ARULA. *Pup. testā albā vel fulvā, ovatā, nitentē, apice obtuso, anfractibus septem, superioribus brevissimis, ultimo maximo; aperturā anticā obliquē productā, labio externo rotundo, canali postico lato, antico producto, recurvo, columellā brevī, latā, truncatā.*

THE LITTLE PLOUGH PUPINA. Shell white or fulvous, ovate, shining, with obtuse apex, whorls seven, upper very short, last very large; aperture obliquely produced in front, outer lip rounded, posterior canal broad, anterior produced, recurved; columella short, broad, truncated.

BENSON. Ann. Nat. Hist. Ser. 2, vol. 17, p. 230.

Hab. Birmah.

Species 6. (Mus. Hanley.)

PUPINA BLANFORDI. *Pup. testā albidā, nitentē, spirā brevī, obtusā, ultimā subglobosā; aperturā anticā obliquē productā; labio externo superne in sinum rotundum productā; columellā brevissimā, truncatā, in canalē curvum terminantē.*

BLANFORD'S PUPINA. Shell rather white, shining, spire short, obtuse, the last rather globose; aperture obliquely produced in front; outer lip produced into a rounded sinus, columella very short, truncated, ending in a curved canal.

THEODALD. Journ. As. Soc. Bengal, 1864.

Hab. Pegu.

Species 7. (Mus. Hanley.)

PUPINA IMBRICIFERA. *Pup. testā fuscā, brevī, ovato-subpyramidalī, nitentē; anfractibus sex, superioribus brevibus, convexis, ultimā subglobosā; aperturā anticā obliquē productā, labio externo lato, complanato, margine interno in tiram semicircu-*

larem elevato, canaliculis duobus in tumores linguiformes productis.

THE IMBRICATED PUPINA. Shell brown, short, ovately subpyramidal, shining; whorls six, upper short, convex, last rather globose; aperture obliquely produced in front, outer lip broad, flattened, inner margin raised in semicircular ridge, canals two, produced in linguiform swellings.

BENSON. Ann. Nat. Hist. Ser. 2, vol. 17, p. 230.

Hab. Sylhet, Teria Ghat.

Species 8. (Mus. Sowerby.)

PUPINA MERIDIONALIS. *Pup. testā altā, pupaeformi, acuminatā, fulvā, nitentē; anfractibus sex, convexis scutis; aperturā circulari, margine rotundā; canaliculis longiusculis, callosis.*

THE SOUTHERN PUPINA. Shell elevated, pupa-shaped, acuminate, fulvous, shining; whorls six, rather convex; aperture circular; margin rounded; canals rather long, callous.

PEIFFER. Proc. Zool. Soc. Sowb. Thes. *Pupinidæ*, Pupina, Fig. 33.

Hab. South Australia.

Species 9. (Mus. Sowerby.)

PUPA PLANILABRIS. *Pup. testā altā, pupaeformi, fulvā, nitentē, apice acuminatō; anfractibus convexiusculis; aperturā circulari; margine planulato; canale antico ad suturam elevato, calloso, columellā tenui, ad terminum obliquē truncatā, cuneato, canali brevissimo.*

THE FLAT-LIPPED PUPA. Shell high, pupa-shaped, fulvous, shining, apex acuminate; whorls rather convex; aperture circular; margin flattened; anterior canal raised at the suture, callous, columella thin, obliquely truncated at the end, cuneate, canal very short.

PEIFFER. Proc. Zool. Soc. Adams. Sowb. Thes. Pupina, Fig. 34.

Hab. South Australia.

Species 10. (Mus. Brit.)

PUPINA AUREA. *Pup. testā breviter pupaeformi, aureo-fulvā, nitentē; anfractibus superioribus parvis, penultimo alto, inflato, ultimo subgloboso; aperturā obliquē productā, bicanaliculā; canaliculis productis, callosis.*

THE GOLDEN PUPINA. Shell shortly pupaeform, golden-fulvous, shining; upper whorls small, penultimate high, inflated, last rather globose; aperture obliquely produced, with two canals; canals produced, callous.

HIXDS. Voy. Sulphur.

Hab. New Guinea.

Pupina



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15



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19

PUPINIDÆ.

(PUPINA)

PLATE II.

Species 11. (Mus. Brit.)

PUPINA PIGANALICULATA. *Pap. testâ fulvâ, subaurâ, translucidâ, ventricosâ, obliquâ, politâ; anfractibus ultimo et penultimo latis, inflatis, albis; aperturâ obliquâ, columellâ brevi, truncatâ, callo suturali elongatâ, labio externo superne sinuato depresso, albo, rotundo, antice oblique producto.*

THE DOUBLE-CHANNELLED PUPINA. Shell fulvous, slightly golden, translucent, ventricose, oblique, polished; last two whorls broad, inflated, elevated; aperture oblique, columella short, truncated; sutural callus elongated, outer lip sinuously depressed above, narrow, white, rounded, obliquely produced in front.

SOWERBY. Thesaurus, first Monograph.

Hab. Sibonga, Island of Zebu, Philippines.

Species 12. (Mus. Brit.)

PUPINA KERAUDRENI. *Pap. testâ angustâ, fulvâ, politâ, apice obtusâ; anfractibus ultimo et penultimo altis; aperturâ parvâ, columellâ brevissimâ, acutâ; callo suturali inconspicuo, labio externo angustâ, oblique producto.*

KERAUDREN'S PUPINA. Shell narrow, fulvous, polished; apex obtuse, last two whorls high; aperture small, columella very short, sharp; sutural callus inconspicuous, outer lip narrow, obliquely produced.

VIGNAL. Proc. Zool. Soc. 1864, p. 162. Ad. Thes. Conch.

Hab. New Ireland.

Species 13. (Mus. Brit.)

PUPINA MOURHOU. *Pap. testâ subaurâ, ventricosâ, spirâ acuminatâ; anfractibus quinque, rapide crescentibus, ultimo subgloboso; aperturâ obliquâ, callo suturali conspicuo, columellæ margine interno*

reflexo, termino truncato, labio externo oblique producto, crassiusculo, superne depresso.

MOURHOU'S PUPINA. Shell rather golden, ventricose, spire acuminated; whorls five, rapidly increased, the last subglobose; aperture oblique, sutural callus conspicuous, inner margin of the columella reflected, truncated at the end, outer lip obliquely produced, rather thick, depressed above.

PEREYER. Proc. Zool. Soc. 1861, 196.

Hab. Camboja.

Species 14. (Mus. Brit.)

PUPINA ANGASII. *Pap. testâ ventricosâ, solidâ, rubescenti, obliquâ; anfractibus quinque, subâ crenulatâ separatis, penultimo maximo, inflato, ultimo antice oblique subangustato; aperturâ rotundâ, bisanaliculatâ, margine lato, crasso, integro, retroscum reflexo.*

ANGAS'S PUPINA. Shell ventricose, solid, reddish, oblique; whorls five, separated by a crenulated suture, penultimate whorl very large, inflated, the last a little narrowed obliquely in front; aperture rounded, with two canals, margin broad, thick, entire, reflected backwards.

ADAMS. Proc. Zool. Soc. 1875. Pl. 45.

Hab. South Australia.

Species 15. (Mus. — ? Copied.)

PUPINA MOULINSIANA. *Papa testâ ventricosâ, striatâ, flavidâ; anfractibus quinque, tribus superioribus brevibus, rotundis, penultimo majore, inflatâ, ultimo rectiusculo magno; aperturâ subrotundatâ, margine crasso, albo, rimâ superiori angustâ, inferiori magno, columellâ brevi, ad terminum angulatâ, lato, labio externo rotundo, superne oblique depresso.*

MOULIN'S PUPINA. Shell ventricose, striated, yellowish; whorls five, three upper short, rounded,

penultimate larger, inflated, last rather straight, large; aperture rather rounded, margin thick, white, upper notch narrow, lower large, columella short, angular at the end, broad, outer lip rounded, obliquely depressed above.

FISCHER et BERNARDI. Adams, Sowb. Thes. Conch.

No. 25.

Hab. N. Caledonia.

Species 16. (Mus. Brit.)

PUPINA HUMILIS. *Pup. testâ subpyramidalâ, auro-fuscâ; anfractibus quinque, tribus superioribus brevissimis, rotundis, penultimo majori, inflato, ultimo magno, rotundo; aperturâ anticâ circulari, canali antico caudatâ, rimâ posticâ magnâ, labio externo rotundo, posticè obliquè depressa, anticè ante canalē contracto.*

THE HUMBLE PUPINA. Shell rather pyramidal, golden-brown; whorls five, three upper ones very short, rounded, the penultimate larger, inflated, last large, rounded; aperture rounded, anterior canal caudal, posterior notch large, outer lip rounded, posteriorly obliquely depressed, anteriorly contracted in front of the canal.

JACQUENOT. Adams, Sowb. Thes. Conch. No. 25.

Hab. New Guinea.

Species 17. (Mus. Brit.)

PUPINA SUPERBA. *Pup. testâ fuscâ, obliquâ; anfractibus quinque, tribus superioribus brevissimis, rotundis, penultimo declivi, majori, ultimo magno; aperturâ anticâ productâ, margine auro, rotundo, rimâ posticâ magnâ, obliquâ, anticâ obliquè retrorsâ (occlivi).*

THE SUPERB PUPINA. Shell brown, oblique; whorls five, three upper very short, rounded, penultimate sloped, larger, last large; aperture anteriorly produced, margin golden, rounded, posterior notch large, oblique, anterior obliquely turned back (sloped upwards).

PFEIFFER. Mon. Helicorum.

Hab. Sumatra.

Species 18. (Mus. Brit.)

PUPINA VESCOE. *Pup. testâ globoso-pyramidalâ, brevî, politâ, subaureâ; anfractu ultimo inflato, rotundo; aperturâ obliquè oculatâ, anticè productâ; rimâ*

posticâ rotundâ, collo parvo, acuminato, columellâ brevissimâ, labio externo posticè obliquè depresso, ante columellam contracto.

VESCOE'S PUPINA. Shell globose-pyramidal, short, polished, rather golden; last whorl inflated, rounded; aperture obliquely ovate, anteriorly produced; posterior notch rounded, callus small, acuminated, columella very short, outer lip posteriorly obliquely depressed, contracted in front of the columella.

MORELET. Adams, Sowb. Thes. Conch. No. 25.

Hab. Paulo Condor.

Species 19. (Mus. Sowerby.)

PUPINA BORNEENSIS. *Pup. testâ auro-fuscâ, politâ, pyramidalâ; anfractibus quinque, convexis, gradatim crescentibus; aperturâ subrotundâ, anticè obliquè productâ, margine crassiusculo, albo, rotundo; rimâ posticâ inconspicuâ, columellâ obliquè truncatâ.*

THE BORNEAN PUPINA. Shell golden-brown, polished, pyramidal; whorls five, convex, gradually increased; aperture rather round, anteriorly obliquely produced, margin rather thick, white, rounded; posterior notch inconspicuous, columella obliquely truncated.

PFEIFFER. Proc. Zool. Soc. Adams, Sowb. Thes. No. 25.

Hab. Borneo.

Species 20. (Mus. Brit.)

PUPINA PUPINEFORMIS. *Pup. testâ pyramidalâ, rubro-fuscâ, politâ; anfractibus octo, gradatim crescentibus, rotundatis, apice acuminato; aperturâ rotundâ, obliquè paulo productâ, canali postico parvo, rimâ anticâ angustâ, columellâ brevissimâ, latâ, labio externo planulato, ad rimam sinu*

posticâ, etc.

THE PUPINA-SHAPED PUPINA. Shell pyramidal, red-brown, polished; whorls eight, gradually increased, rounded, apex acuminated; aperture rounded, a little produced obliquely, posterior canal small, anterior slit narrow, columella very short, broad, outer lip flattened, with a recurved sinus at the back.

SOWERBY. Thes. Conch. No. 25, *Pupinidæ*, Pl. III. f. 38-9.

Hab. Philippines.



PUPINIDÆ.

PLATE III.

Species 21. (Mus. Brit.)

PUPINA PFEIFFER. *Pap. testā altā, angustā, tenui, fulvā, semi-pellucidā, obliquā; anfractibus quinque, superioribus quatuor brevibus, eductis, ultimo alto, rectiusculis; aperturā parvā, obliquē sub-oratā, productā, canali postico et callo suturali conspicuis, columellā brevissimā, labio externo tenui, albo, educto, superius depresso.*

PFEIFFER'S PUPINA. Shell elevated, narrow, thin, fulvous, semi-pellucid, oblique; whorls five, the four upper short, rounded, the last high, rather straight; aperture small, obliquely sub-ovate, produced, posterior canal and sutural callus conspicuous, columella very short, outer lip thin, white, rounded, depressed above.

DOEHN. Adams, Sowb. Thes. No. 24-5.

Species 22. (Mus. Brit.)

PUPINA THOMPSONI. *Pap. testā solidā, obliquā, fulvā, politā, medio sub-angulata, apice acuminatā; anfractibus quinque, ultimo magno; aperturā anticā obliquē productā, marginē albo, callo suturali linguiformi, labio interno callosa, continuo, columellā latā, obliquā, truncatā.*

THOMPSON'S PUPINA. Shell solid, oblique, fulvous, polished, inflated in the middle, apex acuminate; whorls five, the last large; aperture anteriorly obliquely produced, margin white, sutural callus tongue-shaped, inner lip callous, continuous, columella broad, oblique, truncated.

FORBES. A. Adams, Mon. Sowb. Thes. *Papinidae*, Pl. III. f. 18.

Hab. Australia.

Species 23. (Mus. Sowerby.)

PUPINA MILES. *Pap. testā brevi, brevi, fulvā, subinflata, apice obtusa; anfractibus quatuor, penultimo inflata, brevi, ultimo magno; aperturā obliquē productā, labio externo albo, angustā, callo suturali parvo, columellā brevissimā, acuminatā.*

THE MELLOW PUPINA. Shell short, smooth, fulvous, rather inflated, apex obtuse; whorls four, penultimate inflated, short, last large; aperture obliquely produced, outer lip white, narrow, sutural callus small, columella very short, acuminated.

A. ADAMS — ? Sowerby's Thes. Conch. *Papinidae*, Pl. III. f. 19.

Hab. New Ireland.

Species 24. (Mus. Brit.)

PUPINA STRANGEL. *Pap. testā subcylindricā, fulvā, politā, medio inflata, apice breviter acuminatā; anfractibus quinque, tribus apicalibus brevissimis, parvis, penultimo magno, inflato, ultimo mediocri; aperturā parvā, obliquā, callo suturali linguiformi, labio interno marginato, columellā brevissimā.*

STRANGE'S PUPINA. Shell subcylindrical, fulvous, polished, inflated in the middle, apex shortly acuminate; whorls five, three apical, very short, small, penultimate large, inflated, last middle-sized; aperture small, oblique, sutural callus tongue-shaped, inner lip bordered, columella very short.

PFEIFFER. Mon. Hel. Sowb. Thes. *Papina*, Fig. 24. *Hab.* Moreton Bay.

The inflation of the penultimate whorl, and the comparatively cylindrical form, distinguish this species from several of the preceding.

Species 25. (Mus. — ? Copied.)

PUPINA OTTONIS. *Pap. testā ventricosā, fulvo-rubescens, rectiusculā, brevi, politā; spirā breviter pyramidatā; anfractibus quinque, gradatim crescentibus, ultimo magno, globoso; aperturā sub-rotundā, marginē albo, columellā latā, truncatā, callo suturali subdistanti.*

OTTO'S PUPINA. Shell ventricose, reddish-fawn, rather straight, short, polished; spire shortly pyramidal; whorls five, gradually increased, the last large, globose; aperture rather round, margin white, columella broad, truncated, sutural callus rather distant.

DORIN. — ? Adams, Sowb. Thes. *Pupinidæ*, Part 25, Pl. III. f. 25.

Hab. Isl. Luzon, Philippines.

Species 26. (Mus. Brit.)

PUPINA NICOBARICA. *Pup. testâ obliquâ, ventricosâ, fulco-rubescenti, politâ; anfractibus quatuor, tribus superioribus brevibus, rapidè crescentibus, ultimo alto, inflato; aperturâ circulari, labio externo albo, anticè obliquè productâ, collo suturali mediocri, columellâ brevi truncatâ.*

THE NICOBAR PUPINA. Shell oblique, ventricose, fulvous-reddish, polished; whorls four, three upper short, rapidly increased, last high, inflated; aperture circular, outer lip white, anteriorly obliquely produced; sutural callus middle-sized, columella short, obliquely truncated.

PFEIFFER, Adams, Sowb. Thes. No. 24-5, *Pupinidæ*, *Pupa*, f. 27.

Hab. Nicobar.

Species 27. (Mus. Brit.)

PUPINA RUFA. *Pup. testâ rectâ, subpyramidalitâ, clatâ, rufo-fusâ, ad suturam albo-fuscatâ, apice obtusâ; anfractibus quinque, equaliter crescentibus; aperturâ circulari, margine albido, labio externo rotundo, labio interno valido, collo suturali conspicuo, columellâ crassâ, ad terminum cuneatâ.*

THE REDDISH PUPINA. Shell straight, rather pyramidal, elevated, reddish-brown, with a whitish band at the suture, apex obtuse; whorls five, equally increased; aperture circular, margin whitish, outer lip round, inner lip strong, sutural callus conspicuous, columella thick, cuneate at the end.

PFEIFFER, Adams, Sowb. Thes. Conch. No. 25, *Pupina*, f. 29.

Hab. Japan.

Species 28. (Fig. a, b. Mus. Brit.)

PUPINA MINDOROENSIS. *Pup. testâ breviusculâ, pyramidalitâ, albâ vel fusâ, politâ, spirâ subcuneatâ; anfractibus quinque, equaliter crescentibus, superioribus rotundis, ultimo convexiusculo; aperturâ circulari, labio externo lato, canali postico et rimâ anticâ magnis, columellâ breviusculâ, latâ, truncatâ.*

THE MINDORO PUPINA. Shell rather short, pyramidal, white or brown, polished, spire a little acuminated; whorls five, equally increased, upper ones rounded, the last rather convex; aperture circular, outer lip broad, posterior canal and anterior notch large, columella rather short, rather broad, truncated.

ADAMS & REEVE. Voy. Sam.

Hab. Japan.

HARGRAVESIA. (Adams.)

Canali postico magno, rimâ anticâ nullâ.
Posterior canal large, no anterior notch.

Species 29. (Mus. Sowerby.)

HARGRAVESIA POLITA. *Har. testâ inflatâ, subpyramidalitâ, fusâ, politâ, breviusculâ; anfractibus quinque, tribus superioribus brevibus, rapidè crescentibus, penultimo inflato, ultimo magno; aperturâ circulari, obliquè productâ, canali postico elongato, collo suturali linguiformi, labio externo cir. incrassato, cum interno anticè continuo.*

THE POLISHED HARGRAVESIA. Shell inflated, rather pyramidal, fulvous, polished; rather short; whorls five, the three upper ones short, quickly increased, penultimate inflated, last large; aperture circular, obliquely produced, posterior canal elongated, sutural callus linguiform, outer lip scarcely thickened, anteriorly continuous with the inner lip.

A. ADAMS. Proc. Zool. Soc. 1870.

Hab. Solomon Islands.

Pupina



Callia



PUPINIDÆ.

PLATE IV.

Species 30. (Mus. ———? Copied.)

PUPINA SWINHOE. *Pap. testā rectā, pyramidalī, subventricosā, politā; spirā acuminatā, anfractibus sex, convexis, forē aequaliter crescentibus; aperturā rē circulari, canalibus postico et antico rotundis, latis; columellā latā, subfoveolatā, latē truncatā, labio externo lato, duplicatā.*

SWINHOE'S PUPINA. Shell straight, pyramidal, rather ventricose, polished; spire acuminate; whorls six, convex, almost equally increased; aperture scarcely circular; posterior and anterior canals rounded, broad; columella broad, rather hollowed, broadly truncated; outer lip broad, doubled.

ADAMS (Pupinopsis). Proc. Zool. Soc. 1866, f. 318.

Hab. Isl. Formosa.

Species 31. (Mus. Sowerby.)

PUPINA FINETICOLA. *Pap. testā parvā, levigatā, brevī, fulvā; anfractibus quatuor, duobus superioribus parvis, penultimo inflato, ultimo magno, infra obliquē subattenuato; aperturā anticē productā, circulari.*

THE FINE-INHABITING PUPINA. Shell small, smooth, short, fulvous; whorls four, two upper small, last but one inflated, last large, obliquely rather attenuated; aperture anteriorly produced, circular.

COX. Proc. Zool. Soc. 1866, p. 375.

Hab. Australia.

Species 32. (Mus. Sowerby.)

PUPINA DIFFICILIS. *Pap. testā parvā, subcylindricā, politā, pallidē aurantio-fulvā; anfractibus quatuor, tribus superioribus brevibus, aequaliter crescentibus, ultimo majusculo; aperturā obliquā, canali*

postico lato, columellā brevī, acutā, labio externo obliquē producto, aurantio, crassiusculo.

THE DIFFICULT PUPINA. Shell small, rather cylindrical, polished, pale orange, fulvous; whorls four, three upper short, equally increased, last rather large; aperture oblique, posterior canal broad, columella short, acute, outer lip obliquely produced, orange, rather thick.

SEMPER. Proc. Zool. Soc. 1864, p. 252.

Hab. Pelew Island.

Species 33. (Mus. Brit.)

PUPINA ADAMSI. *Pap. testā altā, subpyramidalī, aurantio-fuscā, politā; anfractibus sex, superioribus rotundis, gradatim crescentibus, ultimo majusculo, convexo; aperturā rotundā, labio interno calido, canali postico elongato, arcuato, callo suturali valido, columellā latā, crasso, truncatā, labio externo supernē sinuato, duplicatā.*

ADAMS' PUPINA. Shell elevated, somewhat pyramidal, orange-brown, polished; whorls six, upper ones rounded, gradually increasing, last rather large, convex; aperture rounded, inner lip strong, posterior canal elongated, curved, sutural callus strong, columella broad, thick, truncated, outer lip sinuous above, doubled.

SOWERBY. *Pupinella Swinhoei*, A. Adams. Proc. Zool. Soc. 1866, p. 318.

Hab. Isl. Formosa.

(CALLIA.)

Species 34. (Fig. a, b, Mus. Sowerby.)

CALLIA LEBEICA. *Cal. testā ventricosā, breviter obliquā, fulvā vel luteā, politissimā; anfractibus quatuor, tribus brevibus, ultimo magno, lateraliter gibboso; aperturā rotundā, margine albo rotundo.*

THE SHINING CALLIA. Shell ventricose, short, ob-

lique, fulvous, or yellowish, brightly polished; whorls four, three short, last large, gibbous at one side; aperture rounded, margin white, rounded.

SOVERBY (Pupina). *Thesaurus Conchyliorum*. *Pupina* (first monograph), No. 1.

Hab. Isl. Panay, Philippines.

Species 35. (Fig. a, b, Mus. Sowerby.)

CALLIA SPLENDENS. *Cal. testā pyramidalā, subventricosā, fuscā, politā; spirā acuminatā; anfractibus quatuor, rapidō crescentibus; aperturā rotundā, margine angustō, rotundō.*

THE RESPLENDENT *CALLIA*. Shell pyramidal, rather ventricose, brown, polished; spire acuminated, whorls four, rapidly increased; aperture rounded, margin narrow, rounded.

DORIN. — ? Adams in Sowerby's *Thesaurus Conchyliorum*, No. 25.

Hab. Lizard Island.

More regularly pyramidal than the preceding, with gradually increasing whorls.

Species 36. (Mus. Sowerby.)

CALLIA AURITA. *Cal. testā angustiusculā, albīdā, politissimā, obliquā; anfractibus quatuor, tribus breviusculis, ultimo majusculo; aperturā obliquē productā, margine rotundō.*

THE EARED *CALLIA*. Shell rather narrow, whitish very polished, oblique; whorls four, three rather short, last rather large; aperture obliquely produced, margin rounded.

ZITZLER — ?

Hab. — ?

Believing, from the narrower form of this shell,

that it differs from *Callia rubra*, I have adopted the name which I find attached in manuscript to a number of specimens.

Species 37. (Mus. Sowerby.)

CALLIA AMBIGUA. *Cal. testā ventricosā, subpyramidalā, brevī, politā, pallidō fulvescenti; anfractibus quinque, ultimo majusculo; aperturā rotundā, obliquē productā, margine aurantiō, columellā ad dorsum perforatā.*

THE AMBIGUOUS *CALLIA*. Shell ventricose, rather pyramidal, short, polished, pale fulvous; whorls five, the last rather large; aperture rounded, obliquely produced, margin orange, columella perforated at the back.

SEMPER — ? (Registoma). Adams, in Sowerby's *Thesaurus*, *Pupinidæ*, Pl. II. *Registoma*, f. 9.

Hab. Isl. Luzon, Philippines.

The minute perforation, visible only at the side or back of the columella, constitute this species a link between the *Registomæ*, which have a distinct notch or canal, and the *Calliæ*, which have the margin of the aperture quite entire. The shell, however, is much more nearly related to the latter than to the former subgenus.

Species 38. (Fig. a, b, Mus. Sowerby.)

CALLIA WALLACEI. *Cal. testā aureo-fulvā, politā, obliquē distortā; anfractibus quatuor, apicalibus planulatis, ad dorsum retrorsis; aperturā parvā, rotundā, simplici.*

WALLACE'S *CALLIA*. Shell golden-fulvous, polished, obliquely distorted; whorls four, the apical ones flattened, turned over the back; aperture small, rounded, simple.

PFEIFFER — ? Adams, in Sowerby's *Thesaurus*, Part 24-5. *Pupinidæ*, Pl. III. *Callia*, f. 7, 8.

Hab. Ceram.

Registoma.



39



40



41



a

42



43



44



b



c



a



b

47



a



b

49



a



b

51

PUPINIDÆ.

(REGISTOMA.)

PLATE V.

Species 39. (Mus. Brit.)

REGISTOMA ENIGMUM. *Reg. testâ pallidâ fideâ, angustâ, subgloboseâ, pudâ; apice obtuso; anfractibus quatuor, penultimo tumido, ultimo magno; apertura subrotundâ, obliquè productâ, margine angustâ, rimâ anticâ angustissimâ.*

THE NARROW REGISTOMA. Shell pale fulvous, narrow, rather cylindrical, polished; apex obtuse; whorls four, penultimate tumid, last large; aperture rather round, obliquely produced, margin narrow, anterior slit very narrow.

SOWERBY. *Thes. Conch. Pupinidæ*, Pl. II, Registoma, f. 8.

Hab. Isl. Luzon, Philippines.

Differing from *Registoma Cumingiana* in form being less elongated, and in the linear notch.

Species 40. (Mus. Brit.)

REGISTOMA VITREUM. *Reg. testâ pyramidalâ, brevî, hyalînâ, fusco-rubescenâ; anfractibus sex, brevibus, fere equaliter crescentibus, tumidis; apertura subcirculârî, margine incrassatâ, reflexâ, aurantîâ, columellâ crassiusculâ, obliquè truncatâ.*

THE GLASSY REGISTOMA. Shell pyramidal, short, hyaline, brownish-red; whorls six, short, almost equally increasing, tumid; aperture rather circular, margin thickened, reflected, orange, columella rather thick, obliquely truncated.

SOWERBY. *Adams, Thes. Conch. Pupinidæ*, Pl. II, Registoma, f. 7.

Hab. Isl. Luzon, Philippines.

Species 41. (Mus. Sowerby.)

REGISTOMA CUMINGIANA. *Reg. testâ exiguâ, albâ, pallidâ fideâ vel albâ, pallidâ, subrotundâ, medio et superâ tumidâ; anfractibus quinque, apicalibus parvis, alteris tumidis, altis, ultimo altissimo, ob-*

liquo; apertura rotundâ, obliquè productâ, margine angustâ, rotundâ, rimâ anticâ linearî.

THE CUMINGIAN REGISTOMA. Shell narrow, raised, pale fulvous, or white, polished, rather solid, tumid in the middle and above, high, the last very high, oblique; aperture round, obliquely produced, margin narrow, rounded, anterior notch linear.

PFEIFFER. *Adams, Sowerby's Thesaurus Conchyliorum, Pupinidæ*, Pl. II., *Registoma*, f. 12, 13.

Hab. New Caledonia.

Species 42. (Mus. Sowerby.)

REGISTOMA GRANDI. *Reg. testâ obliquè subgloboseâ, pallidâ, aurantîâ, vel lacteâ, vel purpurascenâ; anfractibus quinque, tribus superioribus brevissimis, dorsâ retrorsis; penultimo brevi, obliquè, ultimo subgloboseo, versus aperturam obliquè gibboso, medio planulato; apertura obliquè productâ, labio exte-riori expanso, columellâ planulatâ, truncatâ; rimâ rotundatâ.*

THE LARGE REGISTOMA. Shell obliquely subglobose, polished, orange or milk-white, or purplish; whorls five, three upper very short, turned over the back, last but one short, oblique, last rather globose, obliquely gibbous towards the aperture, flattened in the middle; aperture obliquely produced, outer lip expanded, columella flattened, truncated; notch rounded.

GRAY. *Adams, Sowerby's Thes. Conch. Pupinidæ*, Pl. II., *Registoma*, f. 1, 2, 3.

Hab. Philippines.

Species 43. (Mus. Sowerby.)

REGISTOMA FUSCUM. *Reg. testâ altâ, pyramidalâ, fusco-rubescenâ, pudâ; spirâ acuminatâ; anfractibus 7, breviusculis, lentè crescentibus, con-*

vexis, ultimo subrotundo; aperturâ subcirculari, margine aurantio, labio externo rotundo, columellâ rectâ, truncatâ, rimâ rotundâ.

THE BROWN REGISTOMA. Shell high, pyramidal, reddish-brown, polished; spire acuminate; whorls seven, rather short, slowly increased, convex, the last rather round; aperture rather circular, margin orange, outer lip rounded, columella straight, truncated, notch round.

GRAY. Adams, Sowb. Thes. Conch. *Papinida*, Registoma, f. 4, 5.

Hab. Philippines.

Species 44. (Mus. Sowerby.)

REGISTOMA SMILE. *Reg. testâ altâ, subventricosâ, fulvâ, politâ, subpyramidatâ, spirâ obtusâ; anfractibus septem, superioribus breviusculis, lentè crescentibus, convexis, penultimo majusculo, ultimo magno; aperturâ subcirculari, margine albo, labio externo crasso, columellâ crassâ, cuneatâ, rimâ anticâ magnâ, rotundâ.*

THE SIMILAR REGISTOMA. Shell high, rather ventricose, fulvous, polished, rather pyramidal, spire obtuse; whorls seven, upper rather short, slowly increasing, convex, penultimate rather large; aperture rather circular, margin white, outer lip thick, columella thick, cornered, anterior notch large, rounded.

GRAY. Adams, Sowb. Thes. Conch. *Papinida*, Pl. II., Registoma, f. 6.

Hab. Isl. Luzon, Philippines.

If there be any tangible character besides the white lip distinguishing this species from the preceding, it will be found in the last two whorls being disproportionately ventricose, and the spire being, in consequence, more nearly pyramidal in form.

Species 45. (Mus. Sowerby.)

REGISTOMA PELLUCIDUM. *Reg. testâ angustâ subglobosâ, subpellucidâ, fulvâ, politâ; anfractibus quinque, tribus superioribus brevissimis, dorso retrorsis, penultimo brevi, subretrorso, ultimo obliquè decurto, subgloboso, ceteris aperturam obliquè gibboso, medio pauli planulato; aperturâ parvâ, margine albo, columellâ angustâ, rimâ lineari.*

THE PELLUCID REGISTOMA. Shell narrowly subglobose, rather pellucid, fulvous, polished; whorls five, three upper very short, turned over the back, last but one short, rather turned backwards, last obliquely raised, somewhat globose, obliquely gibbous towards the aperture, middle a little flattened; aperture small, margin white, columella narrow, notch linear.

SOWERBY. Adams in Thes. Conch. *Papinida*, Pl. II., Registoma, f. 10, 11.

Hab. Isl. Zebu, Philippines.

Species 46. (Mus. Sowerby.)

REGISTOMA COMPLANATUM. *Reg. testâ fulvâ, vel fuscâ, angustâ, subcylindricâ, altâ, politâ, spirâ obtusâ; anfractibus quatuor, duobus superioribus brevibus, rotundis, duobus inferioribus altis, cylindricis; aperturâ simplici, obliquè productâ, rimâ anticâ lineari.*

THE FLATTENED REGISTOMA. Shell fulvous, or brown, narrow, rather cylindrical, high, polished, spire obtuse; whorls four, upper two short, round, lower two high, cylindrical; aperture simple, obliquely produced, anterior notch linear.

PEASE. Adams, Sowb. Thes. Conch. *Papinida*, Pl. II., Registoma, f. 14, 15.

Hab. Kingsmill Group, Pacific.

A narrower and smaller shell than *Registoma pellucidum*.

Species 47. (Mus. Sowerby.)

REGISTOMA BRAZIERI. *Reg. testâ fulvâ, politâ, altâ, angustâ, medio subventricosâ; apice obtuso; anfractibus quinque tribus, superioribus brevibus, penultimo inflato, ultimo majusculo, obliquè, anticè subattenuato; aperturâ obliquè productâ, parvâ, circulari, rimâ apertâ.*

BRAZIER'S REGISTOMA. Shell fulvous, polished, high, narrow, rather ventricose in the middle; apex obtuse; whorls five, three upper short, penultimate inflated, last rather large, oblique, anteriorly a little attenuated; aperture obliquely produced, small, circular, notch open.

CRASSE. Journ. de Conch. No. XIII.

Hab. Etromanga in the Pacific.

Catulus



17



18



19



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21



22



23



24



25



26

PUPINIDÆ.

PLATE VI.

Species 48. (Mus. Hanley.)

CATAULUS NIETTERI. *Cat. testâ fusiformi, pallide fulvâ, vel fuscâ, fusco-viridi, strigatâ, spirâ altâ, pyramidalâ; anfractibus septem, superioribus lente crescentibus, penultimâ et ultimâ majusculis, penultâ inflatis, ultimâ ad umbilicem latè carinato; aperturâ subproductâ, labio externo duplicato, margine externo subulato.*

NIETTER'S CATAULUS. Shell fusiform, pale fulvous, or brown, striped with brownish-green, spire raised, pyramidal; whorls seven, upper slowly increasing, penultimate and last rather large, a little inflated, last broadly keeled at the umbilicus; aperture somewhat produced, outer lip duplicate, outer margin slightly winged.

HANLEY. Indian Shells.

Hab. : India.

Species 49. (Mus. — ? Copied.)

CATAULUS TORTUOSUS. *Cat. testâ albidâ, fusiformi; anfractibus septem, rotundis, inflatis, ultimâ infra carinatâ, ad aperturam latato; aperturâ distantî, obliquè productâ, margine interno reflexo.*

THE TORTUOUS CATAULUS. Shell white, fusiform; whorls seven, rounded, lower inflated, last keeled below, loosened at the aperture; aperture distant, obliquely produced, margin entire, reflected.

GEAY. —? Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 1.

Hab. Nicobar Island.

Species 50. (Mus. — ? Copied.)

CATAULUS CALCADENSIS. *Cat. testâ fuscâ, altâ, subcylindricâ, obliquè striatâ; anfractibus septem, convexis, suturâ profundâ; ultimâ anfractu latè carinato; aperturâ disjunctâ, perpendiculariter subulatâ, anticâ rostratâ, rimâ anticâ maximâ, labio externo duplicato.*

THE CALCADIAN CATAULUS. Shell brown, high, subcylindrical, oblique, striated, whorls seven, convex, suture deep; last whorl with a wide keel, aperture disjoined, perpendicularly rather ovate, anteriorly beaked, anterior notch very large, outer lip double.

BEDDOME. Hanley, Indian Shells.

Hab. Calcadia, India.

Species 51. (Mus. Brit.)

CATAULUS DUPLICATUS. *Cat. testâ fuscâ, rubescenti, subpyramidalâ, robustâ, medio et infra subinflata; anfractibus octo, superioribus brevibus, attenuatis, ultimis tribus altis, inflatis; umbilico magno, carinâ crassâ; aperturâ rotundâ, auriculâ.*

THE DUPLICATE CATAULUS. Shell reddish-brown, rather pyramidal, robust, rather inflated in and below the middle; whorls eight, upper short, attenuated, last three high, inflated; umbilicus large, keel thick; aperture round, orange.

PERIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 2.

Hab. Ceylon.

Species 52. (Mus. Brit.)

CATAULUS CEMINGII. *Cat. testâ fuscâ, solidâ, subfusiformi, angularitè rugatâ; spirâ acuminatâ, infra medium inflatâ, umbilico majusculo, carinâ prominenti; aperturâ subrotundâ, margine albo, labio externo lato, leviter duplicato, rimâ anticâ maximâ.*

CEMING'S CATAULUS. Shell brown, solid, rather fusiform, angularly wrinkled; spire acuminated, inflated below the middle, umbilicus rather large, keel prominent; aperture rather round, margin white, outer lip broad, slightly double, anterior notch very large.

PERIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 3.

Hab. Ceylon.

Species 53. (Mus. Hanley.)

CATAULUS BLANFORDI. *Cat. testâ fusca-rubescenti, pyramidatâ, altâ, superius attenuatâ; anfractibus novem, tribus inferioribus subinflatis, convergentibus, umbilico angustiusculo, carinâ crassâ; aperturâ subovatâ, margine aurantio, lato, convexo, rimâ antica maximâ.*

BLANFORD'S CATAULUS. Shell red-brown, pyramidal, high, attenuated above; whorls nine, three lower rather inflated, rather convex; umbilicus rather narrow, keel thick; aperture rather ovate, margin orange, broad, convex, anterior notch very large.

DORRIS. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 8.

Hab. Kandy, Ceylon.

Species 54. (Mus. Sowb.)

CATAULUS THWAITESII. *Cat. testâ fusca-rubescenti, fusiformi, robustâ, breviusculâ; anfractibus septem, medianis inflatis, ultimo infra ante carinam contracto, umbilico parvo; aperturâ subovatâ, margine lato, duplicato, albo.*

THWAITES'S CATAULUS. Shell reddish-brown, fusiform, robust, rather short; whorls seven, middle inflated, last below contracted before the keel; umbilicus small; aperture rather oval, margin broad, doubled, white.

PFEIFFER. Adams, Sowb. Thes. *Pupinidæ*, Pl. II., *Cataulus*, f. 6.

Hab. Ceylon.

Species 55. (Mus. Sowb.)

CATAULUS RECURVATUS. *Cat. testâ latâ pyramidatâ, stramineâ, ventricosâ, apice acuminatâ, rubra; anfractibus septem, rotundis, æqualiter crescentibus, ultimo ante carinam contracto, umbilico angusto, carinâ tenui; aperturâ majusculâ, margine lato, duplicato, infra ad rimam recurvato, rimâ maximâ.*

THE RECURVED CATAULUS. Shell broadly pyramidal, straw-coloured, ventricose, apex acuminated, red; whorls seven, rounded, equally increased, last contracted before the keel, umbilicus nar-

row, keel thin; aperture rather large, margin broad, doubled, bent backwards below the notch, notch very large.

A. ADAMS. Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 16.

Hab. Ceylon.

The duplicate edge of the aperture, where interrupted by the notch, terminates at each side in a prominent point.

Species 56. (Mus. Hanley.)

CATAULUS EURYTTREMA. *Cat. testâ rubrâ, ventricosâ, pyramidatâ, versus apicem attenuatâ, acuminatâ, medio et infra inflatâ; anfractibus novem, duobus ultimis latis, inflatis, ultimo ad carinam contracto, umbilico lato, carinâ acutâ; aperturâ perpendicularly oblongâ, marginibus externo et antico latissimis, labio externo leviter duplicato, rimâ maximâ.*

THE BROAD-EDGED CATAULUS. Shell red, ventricose, pyramidal, attenuated towards the apex, acuminated, inflated in and below the middle; whorls nine, two last broad, inflated, last contracted at the keel, umbilicus broad, keel sharp; aperture perpendicularly oblong, outer and lower margins very wide; outer lip slightly double, notch very large.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 17.

Hab. Ceylon.

Species 57. (Mus. Sowb.)

CATAULUS LAYARDI. *Cat. testâ breviusculâ, flavidâ, pyramidatâ, spirâ acuminatâ; anfractibus convexis, umbilico lato, carinâ acutâ; aperturâ albâ, margine utrinque duplicato, rimâ parvâ, rotundâ.*

LAYARD'S CATAULUS. Shell rather short, yellow, pyramidal, spire acuminated; whorls convex, umbilicus broad, keel sharp; aperture white, margin doubled on each side, notch small, round.

GRAY. Adams, Sowb. Thes. Conch. *Pupinidæ*, Pl. II., *Cataulus*, f. 7.

Hab. Ceylon.

Catantulus



PUPINIDÆ.

PLATE VII.

(CATACULUS)

Species 58. (Fig. a, b, Mus. Brit.)

CATACULUS MARGINATUS. *Cat. testā angustā, pyramidalā, albā vel fuscā; anfractibus octo, levē crescentibus, undulatis rugatis, ultimo infra contracto, acutē carinato, totus carinam umbilicato; aperturā subrotundā, rimā parvā, labio externo duplicato, infra ad rimam acutē rostratā.*

THE BORDERED CATACULUS. Shell narrowly pyramidal, white or brown; whorls eight, slowly increased, with wavy wrinkles, the last contracted below, acutely keeled, widely umbilicated within the keel; aperture rather rounded, notch small, outer lip duplicated, sharply beaked below at the notch.

PFEIFFER. Mon. Helicorum.

Hab. Ceylon.

Species 59. (Mus. Sowerby.)

CATACULUS AUSTENIANUS. *Cat. testā latē pyramidalā, brevissimā, ventricosā; fusco-rubescēte; anfractibus octo, convexis; ultimo carinā crassā et umbilico magno terminatā; aperturā magnā, rotundā, margine aurantio, incrassato, lato, convexo; rimā magnā, rotundā.*

AUSTEN'S CATACULUS. Shell broadly pyramidal, rather short, ventricose; reddish brown; whorls eight, convex, last ending with a thick keel and large umbilicus; aperture large, round, margin orange, thickened, convex, broad; notch large, rounded.

BENSON. Ann. Nat. Hist. Ser. 2.

Hab. Ceylon.

Species 60. (Mus. Hanley.)

CATACULUS PYRAMIDATUS. *Cat. testā latē pyramidalā, ventricosā, fusco-rubescēte, tenuiter striatā; anfractibus septem, ultimo convexo, carinā crassā et*

umbilico lato terminatā; aperturā rotundā, margine albā, lato, planulato, rimā obliquā, mucinā.

THE PYRAMIDAL CATACULUS. Shell broadly pyramidal, ventricose, reddish brown, finely striated; whorls seven, the last convex, ending in a thick keel and broad umbilicus; aperture rounded, margin white, broad, flattened, notch oblique, very large.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Ceylon.

Species 61. (Mus. Hanley.)

CATACULUS HEMASTOMUS. *Cat. testā latē pyramidalā, obliquē striatā, fidrā; apice acuminatō; anfractibus octo, convexis, ultimo carinato, supra carinā contracto; aperturā mucinā, rotundā; margine latissimo, convexo, rictū rubro, ad suturam elevato, infra rotundē rostrato, rimā magnā, rotundā.*

THE RED-MOUTHED CATACULUS. Shell broadly pyramidal, obliquely striated, fulvous; apex acuminate; whorls eight, convex, the last keeled, contracted above the keel; aperture very large, rounded; margin very broad, convex, bright red, raised at the suture, roundly beaked below, notch large, round.

PFEIFFER. Proc. Zool. Soc. 1852.

Hab. Ceylon.

More elegantly fusiform and acuminate than the two preceding.

Species 62. (Mus. Sowerby.)

CATACULUS TEMPLEMANI. *Cat. testā subfusiformi, angustā, fusco-rubescēte; anfractibus octo, medianis subventricosis, ultimo infra contracto, umbilico angustissimo; aperturā subrotundā, margine rictū aurantio, angustō, infra in rostrum obtusissimum productō; rimā parvā.*

TEMPLEMAN'S CATAULUS. Shell rather fusiform, narrow, reddish brown; whorls eight, middle ones rather ventricose, last contracted below, with a rather narrow umbilicus; aperture rather ovate, margin bright red, narrow, produced below in a very obtuse beak; notch small.

PFEIFFER. Adams. Sowb. Thes. Conch. *Pupinidæ*, Cataulus, Fig. 62.
Hab. Ceylon.

Species 63. (Mus. Hanley.)

CATAULUS LEUCOCHELLUS. *Cat. testâ pyramidalâ, striatâ, flavidâ; anfractibus octo, medianis subventricosâ, apicalibus parvis, attenuatis, ultimo supra carinam validè contracto; carinâ acutâ; umbilico magno; aperturâ subovatâ, margine expanso, albo, reflexo, recurvo, ad suturam elevato, ad rimam producto; rimâ maximâ.*

THE WHITE-EDGED CATAULUS. Shell pyramidal, striated, yellow; whorls eight, middle sub-ventricose, apical small, attenuated, last strongly contracted above the keel; keel sharp; umbilicus large; aperture rather ovate, margin expanded, white, reflected, bent backwards, raised at the suture, produced at the notch; notch very large.

A. ADAMS. Sowb. Thes. Conch. *Pupinidæ*, Cataulus, Fig. 62.
Hab. Ceylon.

Species 64. (Mus. Hanley.)

CATAULUS DECORUS. *Cat. testâ subfusiformi, levigatâ, rubro-fuscâ; anfractibus septem, subelevatis, convexis, ultimo supra carinam validissimè coarctato; carinâ magnâ, acutâ; aperturâ parvâ, subovatâ, margine lato, expanso, ad suturam elevato, sub-alato, infra rostrato, rimâ magnâ.*

THE DECOROUS CATAULUS. Shell subfusiform, smooth,

reddish-brown; whorls seven, rather elevated, convex, last very strongly contracted above the keel; keel large, sharp; aperture small, sub-ovate, margin broad, expanded, raised and somewhat winged at the suture, beaked below, notch large.

BENSON. Adams. Sowb. Thes. Conch. *Pupinidæ*, Cataulus, Fig. 13.
Hab. Ceylon.

Species 65. (Mus. Hanley.)

CATAULUS AUREUS. *Cat. testâ altâ, subfusiformi, aurantâ, tenuiter striatâ; anfractibus septem, altis, tribus vel quatuor apicalibus roseis, attenuatis, medianis subventricosâ, ultimo elevato; aperturâ mediocri; margine duplicato, extus expanso, infra validè rostrato; rimâ maximâ.*

THE GOLDEN CATAULUS. Shell raised, subfusiform, orange, finely striated; whorls seven, elevated, three or four apical rosy, attenuated; middle rather ventricose, last raised; aperture middle-sized; margin double, expanded on the outside, strongly beaked below; notch very large.

HANLEY. Indian Shells, Pl. 106, Fig. 9.
Hab. India.

(ARINIA.)

Species 66. (Mus. — ? Copied.)

ARINIA MINOR. *Ari. testâ parvâ, pupæformi, fuscâ; anfractibus quatuor, brevibus, rotundis, superioribus elevato-striatis; aperturâ rotundâ, margine albo, integro.*

THE SMALL ARINIA. Shell small, pupa-shaped, brown; whorls four, short, rounded, upper ridge striated; aperture round, margin white, entire.

SOWERBY (Cyclostoma). Adams. Sowb. Thes. Conch. *Pupinidæ*, Arinia, Fig. 1.
Hab. Isl. of Panay, Philippines.



Papilionda



68



69



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Melampus



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74



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76



77

PUPINIDÆ.

PLATE VIII.

(POLLICARIA OR HYBOCISTIS)

Species 67. (Mus. Sowerby.)

POLLICARIA MICHOTI. *Pol. testā solidā, ventricosā, brevī, fusco-purpureā, pupiformi; anfractibus quinque, rapidē crescentibus, ultimo magno, albo, rix uno latere gibboso; umbilico parvo, obliquo; aperturā magnā, subrotundā, posticā subacuminatā; margine aurando, rotundo.*

MICHOT'S POLLICARIA. Shell solid, ventricose, short, brown-purple, pupa-shaped; whorls five, rapidly increased, the last large, elevated, a very little gibbous on one side; umbilicus small, oblique; aperture large, rather round, slightly acuminate posteriorly; margin orange, round.

PEREIREL. Proc. Zool. Soc. 1862, p. 276.

Hab. Camboja, Lao Mountains.

Species 68. (Mus. Brit.)

POLLICARIA GRAVIDA. *Pol. testā solidā, ventricosā, breviter pupiformi, fulvā; subrotundā; apice obtuso, anfractibus quinque, tribus apicalibus brevibus, rapidē crescentibus, penultimo ventricoso, uno latere gibboso, ultimo magno, obliquo, uno latere gibboso; infusā angustā, rimatā, umbilicatā; aperturā subrotundā, margine duplicatā, margine externo supra suturam elevato, subrotundā, margine interno anticō ultra suturam extenso.*

THE HEAVY POLLICARIA. Shell solid, very ventricose, shortly pupiform, fulvous, a little tortuous; apex obtuse, whorls five, three apical short, rapidly increased, penultimate ventricose, gibbous on one side; last large, oblique, gibbous on one side, narrow below, notched, umbilicated; aperture rather rounded, margin duplicated, outer margin raised above the suture, a little tubular; inner margin anteriorly extended beyond the outer.

BENSON. Adams. Sowb. Thes. Conch. *Pupinide*, *Pollicaria*. Fig. 5.

Pollicaria pollez, Gould.

Hab. Moulmein, India.

Species 69. (Mus. Brit.)

POLLICARIA MYERSI. *Pol. testā magnā, inflatā, fulvā, fusiformi; apice obtuso; anfractibus quinque, apicalibus tribus parvis, penultimo magno, ultimo*

maximo; infusā angustā umbilicatā; aperturā magnā, superiōre subacuminatā, margine duplicatā.

MYERS' POLLICARIA. Shell large, inflated, fulvous, fusiform; apex obtuse; whorls five, three apical small, last but one large, last very large; narrowly umbilicated below; aperture large, a little acuminate above, margin doubled.

HAINES. Adams. Sowb. Thes. Conch. *Pupinide*, *Pollicaria*, Fig. 11.

Hab. Siam.

(MEGALOMASTOMA.)

Species 70. (Mus. Brit.)

MEGALOMASTOMA LOWEL. *Meg. testā brevicaulā, pyramidalī, purpureo-fusā; apice acuminatā; anfractibus septem, gradualim crescentibus, convexiscentis; ultimo ad umbilicam carinato; aperturā rotundā, margine duplicatā, expansā, infusā aurandā, costis albis, planulatā.*

LOWEL'S MEGALOMASTOMA. Shell rather short, pyramidal, purple-brown; apex acuminate; whorls seven, gradually increased, rather convex, last keeled at the umbilicus; aperture round, margin duplicate, expanded, orange within, white without, rather flattened.

ADAMS and SOWERBY. Thes. Conch. *Pupinide*, *Megalomastoma*.

Hab. Labuan.

Species 71. (Mus. Sowerby.)

MEGALOMASTOMA TORTUM. *Meg. testā solidā, ventricosā, pupiformi; anfractibus sex, rotundis, tribus apicalibus brevibus, rotundis, pallide fulvis, ultimo purpureo-nigrescente, quam penultimo angustiori; aperturā circulari, margine reflexo, labio interno angustā, externo superā et infusā alato.*

THE TWISTED MEGALOMASTOMA. Shell solid, ventricose, pupa-shaped; whorls six, rounded, three apical short, rounded, pale fulvous, last blackish-purple, narrower than the penultimate; aperture circular, margin reflected, inner lip narrow, outer winged above and below.

WOOD. Suppl. Pl. 6, p. 23.

Cyclostoma auriculatum, D'Orb.

Cyclostoma alutaceum, Menke.

Cyclostoma apertum, Pösy.

Cyclostoma digitale. Gündlach.
Cyclostoma Taylorianum. Pfeiffer.
Cyclostoma idolum. Ferrussac.
Cyclostoma bicolor. Gündling.
Cyclostoma seminudum. Poey.
Hab. Cuba.

Species 72. (Mus. Brit.)

MEGALOMASTOMA SIMULACRUM. *Meg. testā elatā, pyramidatā, rubro-fuscatā, tenuiter striatā; anfractibus decem, convexis; aperturā circulari, margine duplicato, latere interno angustā elevatā, externo latē reflexo, erumpente, plumulato, albo; apud anfractum ultimum angustato, sinuatum plicato.*

THE IMAGE *MEGALOMASTOMA*. Shell elevated, pyramidal, reddish-brown, finely striated; whorls ten, convex; aperture circular, margin duplicate, on the inner side narrowly elevated, on the outer broadly reflected, expanded, flattened, white; narrowed and sinuously plaited against the last whorl.

Morelet. Adams. Sowb. Thes. *Megalomastoma*, Fig. 3, 4.

Hab. Guatemala.

Species 73. (Mus. Sowerby.)

MEGALOMASTOMA GUATEMALENSE. *Meg. testā elatā, pyramidatā, angustā, turratā, fuscatā; anfractibus rotundis, gradatim crescentibus, ultimo angustē umbilicato, carinato; aperturā subrotundā, margine reflexo, angustā, albo.*

THE GUATEMALA *MEGALOMASTOMA*. Shell elevated, pyramidal, narrow, turreted, brown; whorls round, gradually increased, last narrowly umbilicated, carinated; aperture rather rounded, margin reflected, narrow, white.

Pfeiffer. Adams. Sowb. Thes. *Megalomastoma*, Fig. 6.

Hab. Guatemala.

Species 74. (Mus. Sowerby.)

MEGALOMASTOMA LEONINUM. *Meg. testā brevi, brevi, pupaeformi, fulvā, solidā, ventricosā; anfractibus quinque, ultimo magno, infusā carinato et umbilicato; aperturā magnā, subcirculari, margine albo, angustā, reflexo, rotundo.*

THE LEONINE *MEGALOMASTOMA*. Shell short, smooth, pupa-shaped, fulvous, solid, ventricose; whorls

five, last large, keeled and umbilicated below; aperture large, subcircular, margin white, narrow, reflected, rounded.

Pfeiffer. Adams. Sowb. Thes. Conch. *Pupinidæ* (Megal.) Fig. 7.

Hab. Cuba.

A shorter shell than *M. tortum*, with the margin of the aperture not winged.

Species 75. (Mus. Brit.)

MEGALOMASTOMA FUNICULATUM. *Meg. testā angustā, purpureo-fuscatā, pupaeformi, altā; anfractibus sex, rectiusculis, superioribus attenuatis; ultimo alto, rectiliterali, infusā subcarinatā et umbilicatā; aperturā flavidā, subauriformi, margine angustē reflexo, rotundo, integro.*

THE CHIMNEY-SHAPED *MEGALOMASTOMA*. Shell narrow, purple-brown, pupa-shaped, high; whorls six, rather straight, upper attenuated; last high, straight-sided, slightly keeled and umbilicated; aperture yellowish, rather auriform, margin narrowly reflected, rounded, entire.

Benson. Adams. Sowb. Thes. Conch. *Megalomastoma*, Fig. 8.

Hab. Darjiling, India.

Species 76. (Mus. Brit.)

MEGALOMASTOMA BITUBERCULATUM. *Meg. testā solidā, altā, ventricosā, pupaeformi; anfractibus sex, convexis, superioribus pallidis, inferioribus purpureis; suturā profundissimā; aperturā circulari, margine latē reflexo; latere externo foliatum duplicato, apud anfractum ultimum rotundē biolato, post aperturam canaliculato.*

THE BITUBERCULATED *MEGALOMASTOMA*. Shell solid, high, ventricose, pupa-shaped; whorls six, convex, upper pale, lower purple; suture very deep; aperture circular, margin broadly reflected; outer side doubly foliated, roundly two-winged, with a canal behind the aperture.

Sowerby. Adams. Sowb. Thes. *Megalomastoma*, Fig. 10.

Cyclostoma solenatum. Poey.

Hab. Cuba.

A bolder and more cylindrical shell than *Megalomastoma tortum*, with the ala on the margin of the lip at the interrupted part rounded and conspicuous.



Megalomastema.



79



80



81



82



83



84



85



86



87



88

PUPINIDÆ.

PLATE IX.

(MEGALOMASTOMA)

Species 77. (Mus. Sowerby.)

MEGALOMASTOMA DOLLOI. *Meg. testā oblongo-subcylindrico, levigato, omnino pallide aurantiā vel fusco-aurantiā, anfractibus inferioribus fasciā fasciā latā pictā; anfractibus sex, primis rotundis, brevibus; medianis convexiusculis, altis; ultimo altissimo, infra prapē aperturam curvato, angustē umbilicato; aperturā anticē subproductā, circulari, margine integro, rotundo.*

D'ORRIGNY'S MEGALOMASTOMA. Shell oblong-subcylindrical, smooth, all over pale orange or brown orange, with the lower whorls painted with a broad brown band; whorls six, the first rounded, short; middle rather convex, high; last very high, keeled below near the aperture, narrowly umbilicated; aperture anteriorly rather produced, circular, margin entire, rounded.

PFEIFFER. Adams. Sowb. Thes. Conch. *Papinidæ*, Megalomastoma, Fig. 12, 13.

Hab. Haiti, Peru.

Species 78. (Mus. Sowb.)

MEGALOMASTOMA SUSPENSEM. *Meg. testā angustē pyramidalā, obliquē striatā, fumoso-fusci; anfractibus novem, gradatim crescentibus; ultimo alto, infra umbilicato et carinato; aperturā descendente, subovatā, margine angusto, albo, planulato, ad suturam acuminato.*

THE SUSPENDED MEGALOMASTOMA. Shell narrowly pyramidal, obliquely striated, smoky-brown; whorls nine, gradually increased: last high, umbilicated and keeled below; aperture descending, rather ovate, margin narrow, white, flattened, acuminated at the suture.

GULDING. Adams. Sowb. Thes. *Papinidæ*, Megalomastoma, Fig. 14.

Cyclostoma Antillarum, Sowerby.

Hab. Isl. St. Thomas, Antilles.

Species 79. (Mus. —? Copied.)

MEGALOMASTOMA VERRUCOSUM. *Meg. testā brevi, subpyramidalā, obscure fuscā, minutē nodulosa; anfractibus sex, gradatim crescentibus, ultimo ante*

aperturam angustissimē umbilicato; aperturā subrotundā, marginē albo, convexo.

THE WARTED MEGALOMASTOMA. Shell short, rather pyramidal, dull brown, minutely nodose, whorls six, gradually increased, last very narrowly umbilicated before the aperture; aperture rather round, margin white, convex.

SHUTTLEWORTH. Adams. Sowb. Thes. *Papinidæ*, Megalomastoma, Fig. 15.

Hab. Porto Rico.

Species 80. (Mus. Brit.)

MEGALOMASTOMA COMPLANATUM. *Meg. testā solidā, pupiformi, ventricosi, fusco-purpureā, ad suturam albo-lineatā; anfractibus quinque, penultimo maximo, ultimo subcompresso; umbilico angustissimo; aperturā magnā, circulari; margine albo, crasso, apud anfractum ultimum partim interrupto.*

THE FLATTENED MEGALOMASTOMA. Shell solid, pupa-shaped, ventricose, brown-purple, with a white line at the suture; whorls five, penultimate very large; last a little compressed; umbilicus very narrow; aperture large, circular; margin white, thick, partly interrupted against the body-whorl.

PFEIFFER. Adams. Thes. Conch. *Papinidæ*, Megalomastoma, Fig. 16.

Hab. Cuba.

The last whorl is a little flattened in front.

Species 81. (Mus. Sowerby.)

MEGALOMASTOMA CROCUM. *Meg. testā ovato-acuminatā, lavi, aurantiā, vel pallidē fulvā, anfractibus inferioribus fusco-fusciis; anfractibus septem, superis angustioribus, infra angustē umbilicatā; aperturā ovatā, posticē angustiusculā, marginē angusto, duplicato.*

THE YELLOW MEGALOMASTOMA. Shell ovate-acuminated, smooth, orange, or pale fulvous, with brown bands on the lower whorls; whorls seven, rather narrow above; below narrowly umbilicated; aperture ovate, posteriorly rather narrow, margin narrow, doubled.

SOWERBY. Thes. Conch. *Papinidæ*, Megalomastoma, Fig. 7.

Cyclostoma bifasciatum. Sowerby
Cyclostoma Gouldianum. Petri.
 Hab. Mauritius. (Var. *fasciatum*.) Guayaquil.

Species 82. (Mus. Sowerby.)

MEGALOMASTOMA MANI. *Meg. testā subpyramidalā, auro-fulvā, tenuiter striatā, apice acuminatā; anfractibus septem, superioribus quinque brevibus, rotundis, penultimo magno, ultimo magno, infra umbilicatā; aperturā rotundā, margine crasso, rotundā, supra infraque prope anfractum ultimum paulo expansa.*

MAN'S MEGALOMASTOMA. Shell rather pyramidal, golden-fulvous, finely striated, apex acuminate; whorls seven, upper five short, round, penultimate large, last large, umbilicated below; aperture round, margin thick, rounded, a little expanded above and below near the last whorl.

POEY. Adams. Sowb. Thes. Conch. *Pupinida*, Megalomastoma, Fig. 18.

Megalomastoma procerum (var.). Poey.
 Hab. Cuba.

This species is not so cylindrical as *Megalomastoma tortum*, but tapers towards the apex.

Species 83. (Mus. Hauley.)

MEGALOMASTOMA ANASTOMA. *Meg. testā breviter pyramidalā, acuminatā, purpureo-fusca; anfractibus sex, rapide crescentibus; aperturā magnā, circulari; margine albo, expanso, apud anfractum ultimum interrupto.*

THE WRY-MOUTHED MEGALOMASTOMA. Shell shortly pyramidal, acuminate, purple-brown; whorls six, rapidly increased; aperture large, circular; margin white, expanded, interrupted against the last whorl.

BENSON. Adams. Sowb. Thes. *Pupinida*, Megalomastoma, Fig. 20.

Hab. India.

The peritreme is white and more broadly expanded than in *M. Lowei*.

Species 84. (Mus. —? Copied.)

MEGALOMASTOMA GUILDINGIANUM. *Meg. testā minūtā, brevi, pupiformi, anfractibus superioribus albis,*

apice obtuso; anfractibus quinque, brevibus, rotundis, penultimo inflato; ultimo intensē purpureo; viz contracto, umbilicatō; aperturā subcirculari, margine angusto, albo, rotundo.

GUILDING'S MEGALOMASTOMA. Shell minute, short, pupa-shaped, upper whorls white, apex obtuse; whorls five, short, round, last but one inflated; last deep purple, a very little contracted, umbilicated; aperture nearly circular, margin narrow, white, rounded.

PFETTER. Adams. Sowb. Thes. Conch. *Pupinida*, Megalomastoma, Fig. 21.

Hab. West Indies.

This minute shell is like a miniature representation of *M. tortum*.

Species 85. (Mus. —? Copied.)

MEGALOMASTOMA TAUPERECULUM. *Meg. testā minūtā, pupiformi, altiusculā, anfractibus superioribus albis, convexis; spirā acuminatā, medio convexā; anfractibus sex, convexiusculis, penultimo inflato, ultimo subcontracto, umbilicatō, intensē purpureo; aperturā circulari, margine albo, duplicato.*

THE TOOOR LITTLE MEGALOMASTOMA. Shell minute, pupa-shaped, rather high, with the upper whorls white, convex; spire acuminate, middle convex; whorls six, rather convex, last but one inflated, last rather contracted, umbilicated, deep purple; aperture circular, margin white, double.

PFETTER. Adams. Sowb. Thes. Conch. *Pupinida*, Megalomastoma, Fig. 22.

Hab. West Indies.

Resembling *M. Guildingianum* in size and general appearance, but more acuminate, and with the rim doubled.

Species 86. (Mus. Sowerby.)

MEGALOMASTOMA ALBUM. *Meg. testā angustē pyramidalā, purpureo-fusca, levigatā; anfractibus septem convexis, ultimo alto, umbilicatō; aperturā subcirculari, margine duplicato, albo.*

THE HIGH MEGALOMASTOMA. Shell narrowly pyramidal, purple-brown, smooth; whorls seven, convex, last high, umbilicated; aperture rather circular, margin doubled, white.

SOWERBY. Adams. Thes. Conch. *Pupinida*.

Hab. Isl. Negroes.



Megalomastoma



88



87



89



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91



92

Raphantus



93



94



95



96



97

PUPINIDÆ

PLATE X.

Species 87. (Mus. Brit.)

MEGALOMASTOMA USGULA. *Meg. testā albi, solidā, pupa-formi, anfractibus sex, convexis, suturā profundā separatis, ultimo angustissimē umbilicato; aperturā anticē obliquē productā, bimarginatā, margine interiori ultra anteriorem obliquē extenso.*

THE TALE MEGALOMASTOMA. Shell white, solid, pupa-shaped, whorls six, convex, separated by a deep suture; last very narrowly umbilicated; aperture anteriorly obliquely produced, with a double margin, interior margin extended obliquely beyond the outer.

POET. Adams, Sowb. Thes. Conch. *Pupinide*, Megalomastoma, Fig. 29.

Hab. Cuba.

The month is bordered by a kind of double rim, the inner rim being, as it were, pushed out obliquely in front, so as to overlap what would otherwise be the outer.

Species 88. (Mus. Brit.)

MEGALOMASTOMA SECTILABRUM. *Meg. testā pyramidalī, albi, acuminatā, pallidissimē fulvā; anfractibus octo, levibus, converiscentis, declivibus; ultimo infra unifasciato, tum angustissimē umbilicato; aperturā subovatā, margine duplicato, parte exteriori adanfractum ultimum interruptā, interiori integri.*

THE SLIT-LIPPED MEGALOMASTOMA. Shell pyramidal, raised, acuminate, very pale fulvous; whorls eight, smooth, convex, sloped; last single-banded, very narrowly umbilicated; aperture rather ovate, margin duplicated, the outer part being interrupted at the body whorl, the inner part entire.

GUILDING. Adams, Sowb. Thes. Conch. *Pupinide*, Megalomastoma, Fig. 24.

Hab. Tavoy, Birmanh.

Species 89. (Mus. —? Copied.)

MEGALOMASTOMA VENTRICOSUM. *Meg. testā solidā, ventricosissimā, brevī, fusco-rubescētī; anfractibus quinque, convexis, latis; penultimo inflato; ultimo purpureo, infra subangustato, profundē umbilicato; aperturā magnā, circularī; margine crasso, aurantiō, rotundō, apud anfractum ultimum partim interrupto.*

THE VENTRICOSE MEGALOMASTOMA. Shell solid, very ventricose, short, reddish-brown; whorls five, convex, broad; penultimate inflated; last rather purplish, a little narrowed below, deeply umbilicated; aperture large, round; margin thick, orange, round, partly interrupted at the last whorl.

D'ORBIGNY. Adams, Sowb. Thes. Conch. *Pupinide*, Megalomastoma, Fig. 25.

Hab. Cuba.

Much more short and ventricose than *Meg. tortuosa*.

Species 90. (Mus. Brit.)

MEGALOMASTOMA GUNDLACHI. *Meg. testā brevi, pupa-formi, aurantiō-fusca; apice obtuso; anfractibus quinque, tribus superioribus rotundis, penultimo magno, retinensculo, ultimo altissimo, recto, infra carinato, umbilicato; aperturā maximā, circulari, margine crasso, rotundō, apud anfractum ultimum semi-interrupto.*

GUILDING'S MEGALOMASTOMA. Shell short, pupa-shaped, orange-brown; apex obtuse; whorls five, three upper rounded, penultimate large, rather straight, last very high, straight, keeled below, umbilicated; aperture very large, circular, margin thick, rounded, half interrupted against the last whorl.

PFEIFFER. Adams, Sowb. Thes. Conch. *Pupinide*, Megalomastoma, Fig. 26.

Hab. Cuba.

Species 91. (Mus. Brit.)

MEGALOMASTOMA CYLINDRACEUM. *Meg. testā altissimā, cylindricā, aurantiā (nonnotatum ultimo anfractū unifasciato), cernis apicem attenuatā; anfractibus octo, altis, rectis; aperturā ovatā, margine albo, angustō.*

THE CYLINDRICAL MEGALOMASTOMA. Shell very high, cylindrical, orange, sometimes with the last whorl single-banded, attenuated towards the apex; whorls eight, high, straight; aperture ovate, margin white, narrow.

CHEMNITZ. Adams, Thes. Conch. *Pupinide*, Megalomastoma, Fig. 27.

Turbo flavulus. Wood.

Helix caeca. Gmelin.

Cyclostoma flava.

Hab. Porto Rico.

More elevated and cylindrical than *M. D'Orbigny*.

Species 92. (Mus. Sowb.)

MEGALOMASTOMA SEBOTINA. *Meg. testā ovato-subpyramidalī, ventricosā, brevī, subacuminatā, fulvā; anfractibus sex, converiscentis, ultimo magno, infra carinato, angustē umbilicato, aperturā subrotundā, anticē obliquē productā, margine crasso, duplicato, parte anteriorem anticē ultra anteriorem extenso.*

THE EVENING MEGALOMASTOMA. Shell ovate-subpyramidal, ventricose, smooth, rather acuminate, fulvous; whorls six, rather convex, last large, keeled below, narrowly umbilicated; aperture rather rounded, anteriorly obliquely produced, margin thick, double, inner part extended in front beyond the outer.

ADAMS. Sowb. Thes. Conch. *Pupinidae*, Megalomastoma, Fig. 28.

Hab. Cuba.

(RAPHAULUS.)

Species 93. (Mus. — ? Copied.)

RAPHAULUS BOMBAZINUS. *Rap. testâ breviter pupiformi, fusco-subaureâ, apice acuminatâ; anfractibus septem, quinque superioribus parvis, brevibus, pyramidalis, penultimo brevissimo, rotundâ prominenti, ultimo magno, rectilinculo; apertura magnâ, rotundâ, margine lato, circulariter canalliculato; tubi rotundâ brevissimi.*

THE BOMBAZINE RAPHAULUS. Shell shortly pupiform, golden-brown; apex acuminate, whorls seven, five upper small, short, pyramidal; penultimate rather short, roundly prominent, last large, rather straight; aperture large, round, margin broad, circularly channelled; tube round, very short.

PEIFFER. Adams, Sowb. Thes. Conch. *Pupinidæ*, Raphaelus, Fig. 3, 7.

Hab. India.

Species 94. (Mus. — ? Copied.)

RAPHAULUS SIMILIS. *Rap. testâ brevissimâ pupiformi, fusco-subaureâ; apice obtuso; anfractibus quinque, tribus superioribus brevissimis, penultimo brevi, inflato; ultimo ventricoso, alto, obliquo; apertura magnâ, rotundâ, margine lato, circulariter canalliculato; tubi rotundâ, brevissimi.*

THE SIMILAR RAPHAULUS. Shell very shortly pupa-shaped, golden brown; apex obtuse; whorls five, three upper very short, penultimate short, inflated, last ventricose, high, oblique; aperture large, rounded, margin broad, with a circular canal; tube rounded, very short.

SOWERBY.

Hab. — ?

In the monograph of Pupinidæ by Mr. Arthur Adams, this species is given as a second example of the preceding. It is, however, much shorter and more obtuse in the spire.

Species 95. (Mus. Hanley.)

RAPHAULUS CHRYSALEIS. *Rap. testâ breviter pupiformi, solidâ, purpureo-fusâ; apice obtuso, an-*

fractibus quinque, tribus superioribus brevibus, penultimo alto, rotundâ prominenti; ultimo alto, obliquo; apertura magnâ, circulari, margine lato, circulariter canalliculato; tubi elongatâ, perpendiculariter super anfractum ultimum decumbenti.

THE CHRYSALEIS RAPHAULUS. Shell shortly pupa-shaped, solid, purple-brown; apex obtuse, whorls five, three upper short, last but one elevated, roundly prominent; last elevated, oblique; aperture large, circular, margin broad, with a circular channel, tube elongated, perpendicularly decumbent upon the last whorl.

PEIFFER. Proc. Zool. Soc. 1852, p. 158.

Hab. Ava, Moulemein.

The tube runs up the side of the last whorl, nearly reaching the suture.

Species 96. (Mus. Brit.)

RAPHAULUS LORAINI. *Rap. testâ breviter pupiformi, solidâ, purpureo-fusâ, ultimo anfractu albo suprâ, ad suturam anfractulo; apice obtuso; anfractibus quinque, brevibus, penultimo rotundâ prominenti, ultimo rectilinculo; apertura magnâ, circulari, margine albo, cylixo, rotundâ; tubi brevissimi, extra marginem aperti.*

LORAINI'S RAPHAULUS. Shell shortly pupa-shaped, solid, purple-brown, last whorl with a single white band above the suture; whorls five, short, last but one roundly prominent; last rather straight; aperture large, circular, margin white, reflected, rounded; tube very short, open beyond the margin.

PEIFFER. Proc. Zool. Soc. 1852.

Hab. Palo Ponang.

Resembling *R. bonthecinus* and *R. similis*, but with no groove round the margin of the aperture.

Species 97. (Fig. a, b, Mus. Hanley.)

RAPHAULUS BLANFORDI. *Rap. testâ brevissimâ, ventricosâ, fusâ; apice subpyramidalâ; anfractibus quinque, duobus apicalibus parvis, brevibus, penultimo inflato, ultimo brevi, subinflato; apertura circulari, margine crasso, albo; tubi retrorsum plicati, longè super suturam ad dorsum producti.*

BLANFORD'S RAPHAULUS. Shell very short, ventricose, brown; apex rather pyramidal; whorls five; two apical small, short, last but one inflated, last short, rather inflated; aperture circular, margin thick, white; tube bent backwards, produced to some length over the suture at the back.

BENSON. An. Nat. Hist. 1857, p. 201.

Hab. Near Darjiling, in Sikkim, Himalaya.

PUPINIDÆ.

	Plate		Page
Adamsii. Pu. <i>Sowerby</i>	IV. 55	grande. Re. <i>Gray</i>	V. 42
altum. M. <i>Sowerby</i>	IX. 77	grandis. Pu. <i>Forbes</i>	I. 4
atolucena. M. Menke	VIII. 74	gravida. Po. <i>Benson</i>	VIII. 68
ambigua. Ca. <i>Sowerby</i>	IV. 56	Guatemalense. M. <i>Pfeiffer</i>	VIII. 73
anastoma. M. <i>Benson</i>	IX. 80	Guilidingianum. M. <i>Pfeiffer</i>	IX. 81
Apollonia. P. <i>Forbes</i>	II. 11	Gundlachii. M. <i>Pfeiffer</i>	X. 90
aperturn. M. <i>Poey</i>	VIII. 74	hamastomus. Cat. <i>Pfeiffer</i>	VII. 61
artata. Pu. <i>Benson</i>	I. 3	humilis. Pu. <i>Adams</i>	II. 16
..... Pu. <i>Benson</i>	I. 5	Idolus. M. <i>Ferrussac</i>	VIII. 71
..... Pu. <i>H</i>	I. 10	imbricifera. Pu. <i>Benson</i>	I. 7
aureus. Cat. <i>Hendley</i>	VII. 65	Keraudreni. Pu. <i>Vigout</i>	II. 12
auriculatum. M. D'Orbigny	VIII. 74	Layardi. Cat. <i>Adams</i>	VI. 57
aurita. Ca. <i>Zeigler</i>	IV. 56	leucocheilus. Cat. <i>Adams</i>	VII. 63
Austenianus. Cat. <i>Benson</i>	VII. 67	leoninum. M. <i>Pfeiffer</i>	VIII. 71
bicunadulata. Pu. <i>Sowerby</i>	II. 14	Lorainii. Ra. <i>Pfeiffer</i>	X. 96
bicolor. M. <i>Guilting</i>	VIII. 74	Lowei. M. <i>Adams</i>	VIII. 70
bilinguis. Pu. <i>Pfeiffer</i>	I. 1	lubrica. Ca. <i>Sowerby</i>	IV. 35
bituberculatum. M. <i>Sowerby</i>	VIII. 76	Mami. M. <i>Poey</i>	IX. 82
Blanfordi. Cat. <i>Dohrn</i>	VI. 54	marginatus. Cat. <i>Pfeiffer</i>	VII. 58
Blanfordi. Pu. <i>Theobald</i>	I. 6	meridionalis. Pu. <i>Pfeiffer</i>	I. 8
Blanfordi. Ra. <i>Benson</i>	X. 97	Mindoroensis. Pu. <i>Adams and Reece</i>	III. 28
Bombeyana. Ra. <i>Pfeiffer</i>	X. 93	minus. Ar. <i>Sowerby</i>	VII. 66
Borneensis. Pu. <i>Pfeiffer</i>	II. 19	mitis. Pu. <i>Adams</i>	III. 23
Brazieri. Re. <i>Crosse</i>	V. 47	Mouhoti. Pu. <i>Pfeiffer</i>	II. 13
caledensis. Cat. <i>Beddome</i>	VI. 50	Mouhoti. Po. <i>Pfeiffer</i>	VIII. 67
chrysalis. Ra. <i>Pfeiffer</i>	X. 95	Moulinsiana. Pu. <i>Fischer</i>	II. 15
complanatum. M. <i>Pfeiffer</i>	IX. 80	Myersii. Pu. <i>Habes</i>	VIII. 69
complanatum. Re. <i>Pease</i>	V. 46	nicobarica. Pu. <i>Pfeiffer</i>	III. 26
croceum. M. <i>Sowerby</i>	IX. 81	Nictieri. Cat. <i>Hendley</i>	VI. 48
Cumingiana. Re. <i>Pfeiffer</i>	V. 41	ottonis. Pu. <i>Dorka</i>	III. 25
Cumingii. Cat. <i>Pfeiffer</i>	VI. 52	pamperculum. M. <i>Pfeiffer</i>	IX. 85
cylindraceum. M. <i>Chemnitz</i>	X. 91	pellucidum. Re. <i>Gray</i>	V. 40
decorus. Cat. <i>Benson</i>	VII. 64	Pfeifferi. Pu. <i>Dohrn</i>	III. 21
difficilis. Pu. <i>Snyder</i>	IV. 32	pineticola. Pu. <i>Coe</i>	IV. 31
Digitale. M. <i>Gundlach</i>	VIII. 71	planilabris. Pu. <i>Pfeiffer</i>	I. 9
D'Orbigny. M. <i>Pfeiffer</i>	IX. 77	polita. Har. <i>Adams</i>	III. 29
duplicatus. Cat. <i>Pfeiffer</i>	VI. 51	proera. M. <i>Poey</i>	IX. 82
enryptrema. Cat. <i>Pfeiffer</i>	VI. 56	pupiniformis. Pu. <i>Pfeiffer</i>	II. 20
exiguum. Re. <i>Sowerby</i>	V. 39	pyramidalis. Cat. <i>Pfeiffer</i>	VII. 69
funiculam. M. <i>Benson</i>	VIII. 75		

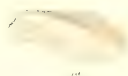
PUPINIDÆ.

	Plate.	Species.		Plate.	Species.
recurvatus. Cat. A. Adams	VI.	55	Tagliaricum. M. Pfeiffer	VIII.	71
rufa. Pu. Pfeiffer	III.	27	Templemani. Cat. Pfeiffer	VII.	62
sectilabrum. M. Guilding	X.	88	Thompsoni. Pu. Forbes	III.	22
senecioidum. M. Poey	VIII.	71	Thwaitesii. Cat. Pfeiffer	VI.	54
serotina. M. Adams	X.	92	tortum. M. Wood	VIII.	71
simile. Re. Gray	V.	44	tortuosus. Cat. Gray	VI.	49
similis. Ra. Sowerby	X.	94	ungula. M. Poey	X.	87
simulacrum. M. Morelet	VIII.	72	ventricosum. M. Goodrich	X.	89
splendens. Dohrn	IV.	35	ventricosa. Pu. Dohrn	I.	2
Strangei. Pu. Pfeiffer	III.	24	verrucosulum. M. Shuttleworth	IX.	79
superba. Pu. Pfeiffer	II.	17	Vescoli. Pu. Morelet	II.	18
suspensum. M. Guilding	IX.	78	vitreum. Re. Sowerby	V.	40
Swinhoei. Pu. A. Adams	IV.	30	Wallacci. Ca. Pfeiffer	IV.	38

MONOGRAPH
OF THE GENUS
GASTROCHENA.

"Contrivance intricate, expressed with ease
Where unassisted sight no beauty sees."—*Cooper.*





GASTROCHÆNA.

PLATE I.

Genus GASTROCHÆNA. *Lessonæ.*

MOLLUSCUM ACETHALOPIDUM, PERFORANS, TUBICULUM.

Testa bivalvis, inequilatralis, equivalvis, anticæ ad marginem ventralæ latè hians, umbonibus anticæ ferè terminalibus; carilo de alibus plerumque subinconspicuis; ligamentum celeratum; tuba umboniformi ferè libera.

MOLLUSK ACETHALOPODE, perforating, tube-inhabiting.

Shell bivalve, inequilateral, equivalve, widely gaping in front at the ventral margin, umbones almost terminal in front; hinge for the most part with inconspicuous teeth; ligament external; tube sometimes nearly free.

The *Gastrochæna* for the most part live, like the *Pholades*, in hollows which they bore in limestone rocks, and which they line with a shelly tube ending in a narrow neck, like a bottle. But some of them, like the *Gastrochæna dubia*, make an almost independent tube, only attached by the neck or by one side to the shell or rock through which they have bored, or to which they are otherwise fixed. There is a specimen in the British Museum of *G. dubia* in which the substance bored through and slenderly lined is crystallized carbonate of lime. The British species is common to France and many other European coasts. The Indias, East and West, the Gallapagos Islands, the Mauritius, South America, the Pacific Islands, produce many species, and a small number were described by the late M. Deshayes, when in London some years since, which had been collected by the late Mr. Cuming in the Philippines.

Species 1. (Fig. a, b, c. Mus. Brit.)

GASTROCHÆNA DUBIA. *Gas. testâ tenui, elongatâ, obliquâ, tenuiter striatâ; hiata centrali mediocri, prope mediani terminantî; cardine tenui, ferè edentulo.*

THE DOUBTFUL GASTROCHÆNA. Shell thin, elongated, oblique, finely striated; ventral hiatus moderate,

terminating near the middle; hinge thin, almost without teeth.

PENNAÏT. British Zoology.

Gastrochæna mediolina. Lamarek.

ROCELLARIA DUBIA. Adams.

Hab. British Mediterranean coasts.

The bottle-shaped tube which covers the valves and syphons of this species is composed, when free, of agglutinated sand and small pebbles; when enclosed, it forms a calcareous lining to the crypt.

Species 2. (Mus. Brit.)

GASTROCHÆNA Plicatilis. *Gas. testâ subcompressâ, epidermide fusâ indatâ, tortuâ, arcâ posticâ elevata, contabulatâ, sulcato-angulatâ, ad terminum truncatâ, arcâ dorsali depressâ, rectiusculâ, a sub medianâ posticâ in sulcum obliquum terminantî; hiata elongato.*

THE PLATED GASTROCHÆNA. Shell sub-compressed, covered with a brown epidermis, tortuous, with the posterior area elevated, contabulated, wrinkled with sulci, truncated at the end, dorsal area depressed, rather straight, middle area posteriorly terminating in an oblique groove; hiatus elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 329.

Hab. Isl. Zebu, Philippines.

The shell very much resembles *G. rosata*, but the plaits on the posterior area are finer, and less deeply cut, and the dorsal area much less projecting.

Species 3. (Mus. Brit.)

GASTROCHÆNA BREVIS. *Gas. testâ inflatâ, brevi, liliâsculâ, hecâsculâ, anticæ gibbosâ, hiata radi arcuata, brevi.*

THE SHORT GASTROCHÆNA. Shell inflated, short, rather solid, rather smooth, gibbous anteriorly; hiatus strongly arched, short.

SWERBY. Proc. Zool. Soc. 1834, p. 21.

Hab. — : —

GASTROCHÆNA.—PLATE I.

Species 4. (Mus. Brit.)

GASTROCHÆNA APERTISSIMA. *Gas. testâ elongatâ, subcompressâ; tenuiter striatâ; latere antice cuneato; latere postico rectiusculo, ad terminum rotundè subacuminatâ; hiata lato et elongata, juxta ad terminum posticum extensa.*

THE WIDE OPEN GASTROCHÆNA. Shell elongated, rather compressed, finely striated; anterior side cuneated; posterior side rather straight, roundly subacuminated; hiatus broad and elongated, almost extending to the posterior end.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab.——?

Species 5. (Mus. Brit.)

GASTROCHÆNA DIFFICILIS. *Gas. testâ obliquâ, tenuiter striatâ, compressâ, cuneiformi, antice gibbosâ, angustâ, postice latâ, ad terminum acuminatâ; hiata lato, paulo post medianâ extensa.*

THE DIFFICULT GASTROCHÆNA. Shell oblique, finely striated, compressed, cuneiform, anteriorly gibbous, narrow; posteriorly broad, acuminate at the end; hiatus broad, extended nearly to the end.

DESHAYES. MS. in Cuming's Collection.

Hab. Isl. St. Thomas.

A rather cuneiform species, but more depressed than the one so named.





GASTROCHLENA.

PLATE II.

Species 6. (Mus. —?)

GASTROCHLENA RETZII. *Gas. testâ oblongâ, subcuneiformi, antice attenuatâ, inflatâ, tenui; epidermide flavescenti indutâ; latere postico latè truncatâ; area postica trigonâ, elevatâ; area dorsali depressâ, angustâ; hiato maximo, latissimo, ferè ad terminum posticum extenso.*

RETZII'S GASTROCHLENA. Shell oblong, rather cuneiform, anteriorly attenuated, inflated, thin; covered with a yellowish epidermis; posterior side broadly truncated; posterior area trigonal, raised; dorsal area depressed, narrow; hiatus very large, very broad, extended almost to the posterior termination.

DESHAYES. *Coch. ile Réunion*, p. 7.

Hab. Isl. Bourbon.

Species 7. (Mus. Sowerby.)

GASTROCHLENA PHILIPPINENSIS. *Gas. testâ angustâ, rectiusculâ, tenui, tenuiter et distanter elevato-striatâ; latere antico acuminatâ, latè hiante; latere postico subacuminatâ.*

THE PHILIPPINE GASTROCHLENA. Shell narrow, rather straight, thin, with fine, raised, distant striae, anterior side acuminate, broadly gaping; posterior side rather acuminate.

DESHAYES. *Proc. Zool. Soc.* 1854, p. 328.

Hab. Isl. Zebu, Philippines.

Species 8. (Mus. Brit.)

GASTROCHLENA DENTICULATA. *Gas. testâ brevi, albâ, inflatâ; medio subdepressâ; latere antico ante umbonem paulo productâ, obliquè stria elevatis minutissimè denticulatis sculptâ; hiato medio.*

THE DENTICULATED GASTROCHLENA. Shell short, high, inflated; slightly depressed in the middle; anterior side a little produced in front of the

umbones, sculptured obliquely with raised, very minutely denticulated striae; hiatus moderate.

DESHAYES. *Proc. Zool. Soc.* 1856, p. 328.

Hab. W. Columbia.

The sculpture in the front part of this shell is sufficient to distinguish the species.

Species 9. (Mus. Sowerby.)

GASTROCHLENA CUCULLATA. *Gas. testâ cuneiformi, crassâ; latere antico brevissimo, angustissimo; latere postico latè expansâ, cæcis levissimè cucullatâ; hiato ovato, medio; cardine dentatus magnis.*

THE HOODED GASTROCHLENA. Shell cuneiform, thick; anterior side very short, very narrow; posterior side broadly expanded, hooded towards the end; hiatus ovate, moderate; hinge with large teeth.

DESHAYES. *Proc. Zool. Soc.* 1856, p. 329.

Hab. W. Indies.

A large and remarkable species, with a peculiar hollow convexity in the valves towards the posterior end.

Species 10. (Mus. Brit.)

GASTROCHLENA BOSTRATA. *Gas. testâ subcompressâ, tortuosâ, oblongâ, epidermide fuscâ indutâ; latere antico ante umbones productâ, prope terminum rugatâ; hiato maximo, ferè ad terminum posticum extenso; latere postico trigono, angulatâ, ante angulum depressâ; area postica elevatâ, contabulatâ, profundè rugatâ; ad terminum latè truncatâ; area dorsali latâ, expansâ; ligamento magno, brevi.*

THE BOSTRATED GASTROCHLENA. Shell rather compressed, tortuous, oblong, covered with a brown epidermis; anterior side produced in front of the umbones, wrinkled near the end; hiatus very

GASTROCHÆNA.—PLATE II.

large, almost extending to the end; posterior side trigonal, angular, depressed in front of the angle; posterior area elevated, contabulated, deeply wrinkled, broadly truncated at the end; dorsal area broad, expanded; ligament large, short.

SPENGLER. Guerin, Mag. Hist. Nat.

Hab. Isl. St. Thomas.

Species 11. (Mus. Brit.)

GASTROCHÆNA RUPELLII. *Gas. testâ crassâ, subovatâ, inflatâ, latere antico ante umbones subproducto,*

quam posticum angustiusculo, tenuiter striato, umbonibus tumidissimis; medio levigato, striato; latere postico validè concentricè striato; hiato centrali moderatè arcuato.

RUPELL'S GASTROCHÆNA. Shell thick, subovate, inflated, anterior side rather produced in front of the umbones, narrower than the posterior, finely striated; umbones very tumid; middle smooth, striated; posterior side strongly concentrically striated; ventral hiatus moderately arched.

DESHAYES. Proc. Zool. Soc. 1854, p. 328.

Hab. Red Sea.





GASTROCHELONA.

PLATE III.

Species 12. (Mus. Brit.)

GASTROCHELONA MYTHILOIDES. *Gas. testâ compressâ, epidermide flavescenti indutâ, oblongâ, tortuosâ; latere antico ante umbones producto, acuminatâ; latere postico ante arcum depressâ, arcu postico contabulatâ, distanter sulcatâ; arcu dorsali angustâ.*

THE MYTHILUS-SHAPED *GASTROCHELONA*. Shell compressed, covered with a yellowish epidermis, oblong, tortuous; anterior side produced in front of the umbones, acuminate; posterior side depressed in front of the area, posterior area contabulated, distantly grooved; dorsal area narrow.

LAMARCK. *Anim. s. Vert.*

Hab. — ?

Resembling *Gastrocheilona rostrata*, but with dorsal area very narrow, and posterior flattened area grooved at distant intervals.

Species 13. (Mus. Brit.)

GASTROCHELONA RINGULOSA. *Gas. testâ depressâ, oblique cuneiformi, elongatâ, antice angustâ, subacuminatâ, postice concentricè distanter laticâ; hiatus mediocri.*

THE WEINKLE *GASTROCHELONA*. Shell depressed, obliquely cuneiform, lengthened, narrow in front, rather acuminate, posteriorly concentrically distantly ridged; gape moderate.

SOWERBY. *Proc. Zool. Soc. 1834*, p. 22.

Hab. Gallapagos Islands.

Species 14. (Mus. Brit.)

GASTROCHELONA LAMELLOSA. *Gas. testâ compressâ, angustâ, elongatâ, antice attenuatâ, acuminatâ, postice concentricè laminais crebris laticâ; hiatus ventrali angustâ, elongatâ.*

THE LAMELLATED *GASTROCHELONA*. Shell compressed, narrow, elongated, anteriorly attenuated, acuminate, posteriorly concentrically ridged with frequent laminae, ventral hiatus narrow, long.

DESHAYES. *Proc. Zool. Soc. 1854*, p. 328.

Hab. Isl. Zebu, Philippines.

Species 15. (Mus. Brit.)

GASTROCHELONA GIGANTEA. *Gas. testâ elongato-ovata, utrinque acuminatâ, leviter dense striatâ, medio leviter depressâ; hiatus latissimâ, fere ad terminum posteriorem calvarum extensa.*

THE GIGANTIC *GASTROCHELONA*. Shell elongated-ovate, acuminate at each end, finely densely striated, slightly depressed in the middle; hiatus very broad, extending nearly to the end of the valves.

DESHAYES. MS. in Cuning's Collection.

Hab. — ?

This large species is named from specimens now in the British Museum. The valves are more regularly ovate, although acuminate at the end and lengthened, than those of *G. cuneiformis*.

Species 16. (Mus. Brit.)

GASTROCHELONA OVATA. *Gas. testâ ventricosissimâ, brevi, ovatâ, solidâ, antice et usque ad medium concentricè striatâ, post medium levigatâ, prope marginem dorsalem oblique tumidâ et valde concentricè striatâ; hiatus ventrali subrotundo.*

THE OVATE *GASTROCHELONA*. Shell very ventricose, short, ovate, solid, anteriorly and as far as the middle concentrically striated, past the middle smooth, near the dorsal margin obliquely tumid, and strongly concentrically striated; ventral hiatus rather round.

SOWERBY. *Proc. Zool. Soc. 1834*, p. 21.

Hab. Panama.

Species 17. (Mus. Brit.)

GASTROCHELONA PUPINA. *Gas. testâ valvulis inequalibus, tubi brevi, angustâ bulbiformi, in sectione quinque quasi-articulatâ, per hiatus ad testas alteras extendi.*

THE PUPINA *GASTROCHELONA*. Shell with valves unknown; tube smooth, narrowly bulb-shaped, quasi-articulated in five sections, attached by the side to shells.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab.—?

This may be only a smooth variety of the *Gastrochæna lagenula*; but I have not seen the valves.

Species 18. (Fig. a, b. Mus. Sowerby.)

GASTROCHÆNA LAGENULA. *Gas. testâ parvâ, arcuatâ, tenui, angustâ; areâ posticâ in tabulas divisâ, inter tabulas sulcatâ. Tabâ irregulariter bulbiformi, agglutinanti, quasi articulatione divisâ.*

THE FLAT GASTROCHÆNA. Shell small, arched, thin, narrow; posterior area divided in tablets, with grooves between the tablets. Tube irregularly bulbiform, agglutinating, divided into quasi-articulations.

LAMARCK. Anim. s. Vert.

Hab. Ceylon, Arracan.

In Adams's Genera, this and the preceding species are included in the genus *Guettera*. The valves of *G. lagenula*, however, are those of a true *Gastrochæna*, while those of *Guettera* have the characteristics of true *Teredines*.

Species 19. (Mus. Brit.)

GASTROCHÆNA TRUNCATA. *Gas. testâ rugosâ, solidiusculâ, epidermide fuscâ indutâ; latere antico subat-*

tenuato, umbonibus gibbosis; latere postico angulato, latâ truncato; areâ dorsali depressâ; hiatu lato, elongato; dente cardinali magno.

THE TRUNCATED GASTROCHÆNA. Shell rugose, rather solid, covered with a brown epidermis; anterior side rather attenuated, umbones gibbous; posterior side angular, broadly truncated; dorsal area depressed; hiatus broad, elongated; cardinal tooth large.

SOWERBY. Proc. Zool. Soc. 1834, p. 21.

Hab. Bay of Panama.

Species 20. (Fig. a. Mus. Brit. Fig. b, Plate IV., Mus. Sowerby.)

GASTROCHÆNA CUNEIFORMIS. *Gas. testâ cuneiformi, tenuiusculâ, anticâ attenuatâ, ante umbones subproductâ, acuminatâ; latere posticollato, versus terminum obliquè subacuminato; hiatu moderatè elongato.*

THE WEDGE-SHAPED GASTROCHÆNA. Shell wedge-shaped, rather thin, anteriorly attenuated, a little produced in front of the umbones, acuminate; posterior side broad, obliquely rather acuminate, towards the end. Hiatus moderately long.

SPENGLER. Guerin, Mag. Nat. Hist.

Hab. Isl. Zebu, Philippines.





GASTROCHÆNA.

PLATE IV.

Species 20. (F. b. See Plate III.)

Species 21. (Mus. Brit.)

GASTROCHÆNA HYALINA. *Gas. testâ tenuissimâ, semipellucidâ, obliquè attenuatâ, antice brevissimâ, angustissimâ, posticè latiusculâ, acuminatâ; hiatus brevissimus.*

THE HYALINE GASTROCHÆNA. Shell very thin, semipellucid, obliquely attenuated, anteriorly very short, posteriorly rather broader, acuminate; hiatus rather short.

SOWERBY. Proc. Zool. Soc. 1834, p. 22.

Hab. — ?

Species 22. (Mus. Brit.)

GASTROCHÆNA SPATULATA. *Gas. testâ tenuissimâ, compressâ, cuneiformi, posticè rugatâ, truncatâ; umbones terminalibus; hiatus angustissimus, elongatus.*

THE SPATULATE GASTROCHÆNA. Shell very thin, compressed, wedge-shaped, posteriorly wrinkled, truncated; umbones terminal; hiatus rather narrow, elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 229.

Hab. Isl. Bohol, Philippines.

Species 23. (Mus. Brit.)

GASTROCHÆNA IMPRESSA. *Gas. testâ subovatâ, tenui, leviter striatâ, utrinque acuminatâ, posticè obliquè sulco depressâ; hiatus lato, elongatus, ferè ad terminum calcar extensus.*

THE IMPRESSED GASTROCHÆNA. Shell rather oval, thin, finely striated, acuminate at each end; posteriorly obliquely depressed with a groove; hiatus broad, elongated, nearly extended to the end of the valve.

DESHAYES. Proc. Zool. Soc. 1854, p. 322.

Hab. — ?

Species 24. (Mus. Brit.)

GASTROCHÆNA LEVIGATA. *Gas. testâ ventricosâ, brevi, obliquè cuneiformi, levigatâ, concentricè striatâ; latere postico subacuminatâ; hiatus brevis, angustissimus.*

THE SMOOTH GASTROCHÆNA. Shell ventricose, short, obliquely cuneiform, smooth, bluish white, posterior side rather acuminate; hiatus short, rather narrow.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. — ?

Species 25. (Mus. Brit.)

GASTROCHÆNA HUMILIS. *Gas. testâ ventricosâ, brevi, obliquè cuneiformi, leviter concentricè striatâ; latere postico subacuminatâ; hiatus brevis, angustissimus.*

THE HUMBLE GASTROCHÆNA. Shell ventricose, short, obliquely cuneiform, finely concentrically striated; posterior side rather acuminate; hiatus short, rather narrow.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. St. Vincent.

Species 26. (Mus. Brit.)

GASTROCHÆNA INTERSECTA. *Gas. testâ brevi, latâ, subcompressâ, lenticulis concentricis numerosis subdistichis et alveis intermediis minoribus leviter sculptâ; latere antice angustissimo, brevi; latere postico lato, margine dorsali elevato, margine terminali subrotundato.*

THE INTERSECTED GASTROCHÆNA. Shell short, broad, rather compressed, sculptured with numerous rather distant and other intermediate smaller concentric laminae; anterior side very narrow, short; posterior side broad, dorsal margin raised, terminal margin rather rounded.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. — ?

GASTROCHÆNA.—PLATE IV.

The larger concentric ridges are a little distant, and the intervals are filled up with smaller raised striae.

Species 27. (Mus. Brit.)

GASTROCHÆNA TENELLA. *Gas. testâ tenuissimâ, elongatâ, angustâ, compressâ, tenuissimè striatâ, modioliformi, post medium obliquè vix conspicuè sulcatâ; hiatus angustiusculo, elongato.*

THE THIN GASTROCHÆNA. Shell very thin, elongated, narrow, compressed, very finely striated, shaped like a modiola, with scarcely conspicuous oblique sulcus; hiatus very narrow, elongated.

DESHAYES. Proc. Zool. Soc. 1854, p. 327.

Hab. Philippine Islands.

Species 28. (Mus. Brit.)

GASTROCHÆNA INTERRUPTA. *Gas. testâ angustâ, rectiusculâ, elongatâ, subdepressâ, tenuissimâ, levigatâ; arcuâ posticâ elevatâ, sulcis concentricis tribus vel quatuor divisâ; hiatus elongato-ovato, posticè abruptè terminantè.*

THE INTERRUPTED GASTROCHÆNA. Shell narrow, rather straight, elongated, rather depressed, very thin, smooth; posterior area raised; divided by

three or four grooves; hiatus elongate-oval, posteriorly abruptly terminating.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. Philippine Islands.

The valves of this species resemble those of *Gastrochæna lagenula*, but are very much more arched. The grooves, by which the posterior area is divided into a series of tablets, have probably, in the latter species, some connection with the exterior partitions of the tube. We have not the tube of the present species, but believe it will prove to belong to the same group.

Species 29. (Mus. Brit.)

GASTROCHÆNA MACROCHISMA. *Gas. testâ brevissimâ, inflatâ, rotundato-cuneiformi, tenuiter striatâ; latere antico ante umbones producto, subacuminato; latere postico latissimo, ad terminum subrotundo, margine dorsali declivi; hiatus latissimo, breviusculo.*

THE WIDE-GAPING GASTROCHÆNA. Shell very short, inflated, roundly cuneiform, finely striated; anterior side produced in front of the umbones, rather acuminate; posterior side very broad, rather rounded at the end, dorsal margin sloped; hiatus very wide, rather short.

DESHAYES. Proc. Zool. Soc. 1854, p. 326.

Hab. Philippine Islands.

GASTROCHÆNA.

	♀	♂	species.
<i>apertissima, Deshayes</i>	I	1	111
<i>brevis, Sowerby</i>	I	3	14
<i>cucullata, Deshayes</i>	II	2	25
<i>cuneiformis, Spengler</i>	III IV	20	1
<i>denticulata, Deshayes</i>	II	8	111
<i>difficilis, Deshayes</i>	I	5	12
<i>dubia, Pécourt</i>	I	1	13
<i>gigantea, Deshayes</i>	III	15	II
<i>hyalina, Sowerby</i>	IV	21	1
<i>humilis, Deshayes</i>	IV	25	11
<i>impressa, Deshayes</i>	IV	23	17
<i>interrupta, Deshayes</i>	IV	28	5
<i>intersecta, Deshayes</i>	IV	26	10
<i>levigata, Deshayes</i>	IV	24	15
<i>lagenula, Lamarek</i>	III	18	11
<i>lunellosa, Deshayes</i>	III		14
<i>macrochisma, Deshayes</i>	IV		25
<i>ovulifera, Lamarek</i>	I		1
<i>mytiloides, Lamarek</i>	III		12
<i>ovata, Sowerby</i>	III		13
<i>Philippinensis, Deshayes</i>	II		7
<i>plicatilis, Deshayes</i>	I		2
<i>pupina, Deshayes</i>	III		17
<i>Retzii, Deshayes</i>	II		5
<i>rostrata, Deshayes</i>	II		10
<i>rugulosa, Sowerby</i>	III		15
<i>Rupellii, Deshayes</i>	II		11
<i>spathulata, Deshayes</i>	IV		22
<i>tenera, Deshayes</i>	IV		27
<i>truncata, Sowerby</i>	III		19

MONOGRAPH
OF THE GENUS
XYLOPHAGA. NAVEA.

"One Name above all glorious names
With its ten thousand tongues
The everlasting sea proclaims,
Echoing angelic songs." *Kebble*



zyl



zyl



zyl



zyl



zyl

Navea



navea

XYLOPHAGA.

Genus XYLOPHAGA. *Torton.*

MOLLUSCUM TEREBRANS, *vermiforme, siphonibus ad terminum divisis. Testi bivalvis globosa, antice latissime angulata apertè, posticè ferè clausa, medio sulco lato divisa, cardine edentulo, callosa. Tabi nulli.*

BORING WORM-SHAPED MOLLUSC, with siphons divided at the end. Shell bivalve, globose, anteriorly very widely angularly open, posteriorly nearly closed, divided in the middle with a wide groove; hinge with no teeth, callous. No tube.

Xylophage are found in floating wood, generally boring across the grain and not with it, as in the case of Teredo. Only two species are known; one British and Boreal, the other collected by Mr. Cuming at Valparaiso.

Species 1. (Mus. Sowerby.)

XYLOPHAGA DORSALIS. *Xyl. testâ globosâ, epidermide tenui aurantio-ciridi indutâ, medio sulco plano costis duabus marginato divisi; latere antico brevi, validissime angulato; latere postico brevissimo, marginè dorsali elevato; laminais accessoriis trigonis, latitudine longitudinem superante.*

THE DORSAL XYLOPHAGA. Shell globose, covered with an orange-green epidermis, divided in the middle by a flat groove bordered by two ribs; anterior side short, very strongly angular; posterior side rather short, with dorsal margin raised, accessory plates trigonal, broader than long.

TETTON. British Bivalves, II. Fig. 45.

Species 2. (Fig. a, b, Mus. Brit.)

XYLOPHAGA GLOBOSA. *Xyl. testâ latiusculâ, latere antico moderate angulato; latere postico producto, marginè dorsali declivi; laminais accessoriis angulatis, longitudine latitudine superantibus.*

THE GLOBOSE XYLOPHAGA. Shell rather broad, anterior side moderately angular; posterior side produced, dorsal margin sloped; accessory plates claw-shaped, longer than broad.

OWERBY. Proc. Zool. Soc. 1834; Thes. Conch. No. 10, p. 505.

Hab. Valparaiso.

The shell is wider and the posterior dorsal margin more sloped than in *X. dorsalis*. The proportions of the accessory plates are reversed.

NAVEA.

Genus NAVEA. *Gray.*

Testa ovata, antice latè arcuatâ hiatus, posticè clausa, marginè superiori hiatus antice lamina reflexâ marginato.

Shell ovate, anteriorly broadly gaping in an arch, posteriorly closed, upper margin of the anterior hiatus bordered by a reflected lamina.

I have not seen any species of this genus but the following one, which seems to perforate the sponges in which it is found embedded.

Species. (Fig. 3, Mus. Brit.)

NAVEA SUBGLOBOSA. *Nav. testâ medio sulco divisi; latere postico brevi, rotundo; latere antico, hiatus maximo, superâ ad marginem utrinque cuneato et reflexo.*

THE SUBGLOBOSE NAVEA. Shell divided by a groove in the middle; posterior side short, rounded; anterior side with a very large hiatus, reflected and cuneate at the margin above.

GRAY. MS. in Brit. Mus.

Hab. — ?

MONOGRAPH
OF THE GENUS
FISTULANA.

"Man is permitted much
To scan and learn
In Nature's frame."—*J. H. Newman.*



FISTULANA.

Genus FISTULANA. Lamarek.

MOLLESCUM VERMIFORME, ARENICOLUM, TUBIFICUM.

Valvula libera, elongata, latè et angulariter hians; cardine lineari, ciliolato. Tuba recta, circularis, antice attenuata, versus terminum posticum crescens, termino per discum convexum perforatum clausa.

Syn. *Gastrochaena*. Spengler (Adams).

MOLLESC VERMIFORM, inhabiting sand, tube-forming.

Valves free, elongated, broadly and angularly gaping; hinge linear, toothless. Tube straight, circular, anteriorly attenuated, increasing towards the posterior end; end closed by a convex perforated disc.

Adopting the nomenclature by which this genus is generally known, we should say that the *Fistulana* resemble the *Gastrochaena* in the most essential characters. Both have free gaping valves enclosed in a tube closed at the anterior end. The main difference is that the former bury their tubes in the sand, only the small siphonal end being visible, but are unattached, while the latter are boring mollusca, and attach their tubes to the various substances in which they make their crypts.

The two or three species hitherto known are found at low water in Singapore, Philippines, and other islands of the Eastern seas.

Species 1. (Fig. a, b, Mus. Brit.)

FISTULANA CLAVA. *Fis. testâ oblongâ, rectiusculâ, latè angulatâ hianti, ad terminum posticum latè truncatâ, margine dorsali recto; umbonibus fere terminalibus; latere antico brevi, subquadrato, acutè angulato, margine denticulato. Tubâ elongatâ, levigatâ, concentricè tenuiter striatâ.*

THE CLUB FISTULANA. Shell oblong, rather straight, broadly angularly gaping, broadly truncated at the posterior end, dorsal margin straight; umbones nearly terminal; anterior side short, rather square, sharply angular, margin denticulated. Tube elongated, smooth, concentrically finely striated.

LAMAREK. Anim. sans Vert.

Gastrochaena munita. Spengler.

Hab. Singapore.

Species 2. (Fig. a, b, c, Mus. Brit.)

FISTULANA AGGLUTINANS. *Fis. testâ angustissimâ, tortâ; hiatu angulatissimo. Tubâ lapillos arcuatosque grana agglutinante.*

THE AGGLUTINATING FISTULANA. Shell very narrow, tortuous; hiatus very angular. Tube agglutinating small stones and grains of sand.

DESHAYES. Proc. Zool. Soc.

Hab. Philippines, &c.

Species 3. (Fig. a, b, c, Mus. Brit.)

FISTULANA GRANDIS. *Fis. testâ calensis magnis, latis, posticè rotundè inflatis; hiatu via angulato, latere antico brevissimo, arcuato. Tubâ concentricè rugis annulatâ.*

THE LARGE FISTULANA. Shell with large broad valves, roundly inflated posteriorly; hiatus scarcely angular, anterior side very short, arched. Tube concentrically annulated with wrinkles.

DESHAYES. Proc. Zool. Soc.

Hab. Philippines, &c.

MONOGRAPH
OF THE GENUS
R I S S O A.

Lord! ope our hearts that we may feel,
Unbind our eyes that we may see,
The wondrous love Thy works reveal.—*Charles Mackay.*



RISSOA.

PLATE I.

Genus **RISSOA.** *Fremurville.*

Testa marina, spiralis, plerumque turrata, brevis vel costata; spirâ acuminatâ, aperturâ semicirculari vel pyriformi, subcanaliculatâ vel integrâ; labio externo plerumque incrassato. Operculum corneum, subspirale.

Shell marine, spiral, generally turreted, smooth or ribbed; spire acuminate; aperture half-round or pyriform, slightly channelled or entire; outer lip for the most part thickened. Operculum horny, subspiral.

The above description and the following monograph are intended to include the genera *Rissoa*, *Alvania*, *Rissoina*, *Hydrobia*, and other genera, which have been separated but not very well defined, and which at least require more careful revision than has yet been accorded to them, and which it is not within the scope of this work to give. The *Rissoa* or 'Rissoidae' are found in all parts of the world, generally in shallow water among seaweeds.

Species 1. (Mus. Sowerby.)

RISSOA (-OINA) SCALAROIDES. *Riss. testâ albâ, altissimâ, anfractibus senis, productis, medio angularis, ad angulum plicatis; aperturâ ferè rotundâ, margine crasso, rotundo, labio interno distincto, angustâ.*

THE SCALARIA-SHAPED RISSOA. Shell white, very high; whorls six, produced, angular in the middle, plaited at the angle, aperture almost round; margin thick, round; inner lip distinct, narrow.

C. B. ADAMS. Shells of Jamaica.

Hab. Philippines.

Species 2. (Mus. Marratt.)

RISSOA EUROPEA. *Riss. testâ subpyramidalâ, costis numerosis longitudinalibus et striis spiralibus sculptâ, fulvâ, latè fusco-fuscatâ; spirâ pyramidalâ, anfractibus concavisculis; aperturâ breviusculâ, margine externo albo, crenulatâ.*

THE EUROPEAN RISSOA. Shell rather pyramidal, sculptured with numerous longitudinal ribs and

spiral striae, fulvous, with broad brown bands; spire pyramidal, whorls rather convex, aperture rather short, outer lip white, crenulated.

Risso. Eur. Mer. Pl. IX. f. 156.

Turbo cimez. Linnaeus.

Rissoa Fremurvillea, *Risso.*

Rissoa granulata, *Philippi.*

Rissoa mammillata, *Risso.*

Hab. Britain, Mediterranean.

Species 3. (Mus. Marratt.)

RISSOA MONTAGUI. *Riss. testâ fuscâ, breviusculâ, costis paucis rudè crenulatis sculptâ; spirâ productâ, pyramidalâ; anfractibus senis, convexisculis; aperturâ subrotundâ, margine crenulatâ.*

MONTAGU'S RISSOA. Shell brown, rather short, sculptured with few, coarsely crenulated ribs; spire produced, pyramidal; whorls six, rather convex; aperture rather rounded, margin crenulated.

PAYRAUDEAU. Cat. Moll. Corse. Pl. V. f. 13-14.

Hab. Mediterranean.

The sculpture resembles that of *Rissoa Europea*, but the ribs are fewer, and more distantly crenulated.

Species 4. (Mus. Brit.)

RISSOA CUMINGII. *Riss. testâ turratâ, albâ, pyramidalâ, acutè cancellatâ; anfractibus septenis, altis, rotundis; ultimo inflato; aperturâ subtrigoniâ, infâ subcanaliculatâ, margine crasso, crenatâ.*

CUMING'S RISSOA. Shell turreted, white, pyramidal, sharply cancellated; whorls seven, high, rounded, last swelled; aperture rather trigonal, with a slight canal below, margin thick, crenated.

REEVE. Proc. Zool. Soc.

Hab. Philippines.

Species 5. (Mus. Brit.)

RISSOA BRUGNIERII. *Riss. (-OINA) testâ pyramidalâ, altâ, albâ, solidâ, costis subcurvis et sulcis distinctis sculptis, spirâ productâ, pyramidalâ, an-*

RISSO.—PLATE I.

fractibus senis, convexiusculis; aperturâ pyriformi, infrâ canaliculata, labio externo reflexo, lato, marginæ interno producto, tenui.

BRUGUIÈRE'S RISSO. Shell pyramidal, high, white, solid, sculptured with slightly curved ribs and distant grooves; spire produced, pyramidal, whorls six, rather convex; aperture pyriform, channelled below; outer lip reflected, broad, inner margin produced, thin.

PAYRAUDEAU. Cat. Moll. Corse. Pl. V. f. 17-18.

Hab. Mediterranean.

Species 6. (Mus. Sowerby.)

RISSO SCALARIA. *Riss. (-oïna) testâ pyriformi, albidâ, parâ, longitudinaliter costatâ, spirâliter tenuissimè striatâ, spirâ altâ, acuminatâ; anfractibus convexis, ultimo ventricoso; aperturâ semicirculari.*

THE SCALARIA RISSO. Shell pyriform, whitish, small, longitudinally ribbed; spirally very finely striated; spire raised, acuminate; whorls convex, last ventricose; aperture half-round.

ADAMS.—?

Hab. St. Vincent.

Species 7. (Mus. Sowerby.)

RISSO D'ORBIGNYANA. *Riss. (-oïna) testâ turrîtâ, tenui, fulvo-albidâ; spirâ elongatâ, anfractibus novenis, irregulariter cariosis, inæqualiter convexiusculis; aperturâ subtrigoniâ, suprâ infrâque canaliculatâ; labio externo anticè angulatum producto.*

D'ORBIGNY'S RISSO. Shell turreted, thin, whitish fawn; spire elongated, whorls nine, irregularly varicose, unequally rather convex; aperture rather trigonal, channelled above and below; outer lip angularly produced in front.

A. ADAMS. Proc. Zool. Soc. 1865. p. 64.

Hab. Australia.

Species 8. (Mus. Marratt.)

RISSO BRYEREA. *Riss. (-oïna) testâ albâ, obliquè costatâ; spirâ turrîtâ, elevatâ; anfractibus septenis, convexiusculâ; aperturâ brevi, pyriformi, suprâ infrâque canaliculatâ.*

BRYER'S RISSO. Shell white, obliquely ribbed; spire turreted, raised; whorls seven, rather convex; aperture short, pyriform, channelled above and below.

MONTAGU. Test. Brit. Pl. XV. f. 8.

Hab. West Indies.

Species 9. (Mus. Sowerby.)

RISSO CONCINSA. *Riss. (-oïna) testâ albidâ, turrîtâ, aliâsculâ; anfractibus senis, convexiusculis, tenuiter costatis, tenuissimè spirâliter striatis; aperturâ majusculâ, infrâ profundè canaliculatâ.*

THE NEAT RISSO. Shell whitish, turreted, rather high; whorls six, rather convex; finely ribbed, very finely spirally striated; aperture rather large, deeply channelled below.

A. ADAMS.

Hab. Japan.

Species 10. (Mus. Marratt.)

RISSO CALATHISCA. *Riss. (Alvania) testâ brevi, subpyramidalâ, fuscâ, longitudinaliter costatâ; spirâliter sulcatâ; costis rotundis, crenulatis; anfractibus ad suturam angulatis, aperturâ subulatâ, margine crasso, crenulato, albo.*

THE LITTLE BASKET RISSO. Shell short, rather pyramidal, brown, longitudinally ribbed; spirally grooved; ribs round, crenulated; whorls angular at the suture; aperture rather oval, margin thick, crenulated, white.

MONTAGU. Test. Brit.

Hab. Britain.

Another variety is figured on Plate X.



RISSOA.

PLATE II.

Species 11. (Mus. Sowerby.)

RISSOA AURISCALPIUM. *Ris.* (*Aeme*) *testâ albâ, ad aperturam apicemque purpurascenti, semipellucidâ, altissimâ, medio paulo inflato; apice acuminato; anfractibus septem ad novem, superioribus frequenter longitudinaliter costatis, ultimo elongato; aperturâ magnâ, ovatâ, labio expanso.*

THE EAR-PICK RISSOA. Shell white, purplish at the aperture and apex, semipellucid, very elevated, a little inflated in the middle, apex acuminated; whorls seven, often longitudinally ribbed, last elongated; aperture large, oval, lip expanded.

LINNEUS, *Systema Naturæ*.

Rissoa acicula, Risso.

Rissoa marginatus, Montagu.

R. acuta, Desmarest.

Hab. Mediterranean.

These long-spined *Rissoa* do not seem to differ generically from the more typical forms.

Species 12. (Mus. Sowerby.)

RISSOA LARIOSA. *Ris.* *testâ ovato-acuminatâ, tenui, semipellucidâ, albo-purpurascenti, leviter costatâ; apice acuminatâ; anfractibus ultimis subinflato, costis infra medium discontinuis; aperturâ magnâ, elongatâ, auriformi, labio expanso.*

THE MEMBRANOUS RISSOA. Shell ovate, acuminated, thin, semipellucid, purplish white, slightly ribbed; apex acuminated; last whorl rather inflated, ribs discontinued below the middle; aperture large, long, ear-shaped, outer lip expanded.

MONTAGU. *Test. Brit.* Vol. II. p. 400.

Hab. Great Britain, Mediterranean.

Species 13. (Mus. Sowerby.)

RISSOA VENUSTA. *Ris.* *testâ subpyramidatâ, subviridi, tenui, apice acuminato, anfractibus tenaciter costatis, ultimo subcentrico, infra medium leviter*

gatis; aperturâ auriformi, labio expanso, intus margine acuto, extus varicoso.

THE BROAD-LIPPED RISSOA. Shell rather pyramidal, greenish, thin; apex acuminated; whorls finely ribbed, last rather ventricose, smooth below the middle; aperture ear-shaped, lip expanded, inside having a sharp edge, outside varicose.

PHILIPPI. *Enum. Moll. Sic.* Vol. I. p. 124. Pl. XXIII. f. 4.

Hab. Mediterranean.

This does not appear to belong to any of the numerous varieties of *Rissoa labiata*. A certain closeness of the outer lip and the distinct cessation of the regular ribs at the middle of the last whorl serve to distinguish it.

Species 14. (Mus. Sowerby.)

RISSOA CELATA. *Ris.* (*Rissoina*) *testâ pyramidatâ, solidâ, albâ, costis nodosis spiritaliter cinctâ, longitudinaliter inter costas striatâ; anfractibus octo, ad latera declivibus, superioribus longitudinaliter costatis, costis angulatis et nodosis; aperturâ subtrigoniâ, labio externo crasso, crenulato.*

THE EMBOSSED RISSOINA. Shell pyramidal, solid, white, spirally girt with nodose ribs, longitudinally striated between the ribs; whorls eight, sloped at the sides, upper longitudinally ribbed, ribs angular and nodose; aperture subtrigonal, outer lip thick, crenulated.

A. ADAMS. *Proc. Zool. Soc.* 1851, 267.

Rissoina striata, Quoy.

Hab. Sigüejor.

Species 15. (Mus. Marrat.)

RISSOA CINGILLUS. *Ris.* *testâ pyramidatâ, levigatâ, cel leviter spicaliter striatâ, fulcâ, castaneo-trifasciatâ; anfractibus quinque, subrotundis; aperturâ parvâ, columellâ calidâ, labio externo obtusè marginatâ.*

RISSOA.—PLATE II.

THE GIRDLE RISSOA. Shell pyramidal, smooth, or slightly spirally striated, fulvous, three-banded with chestnut: whorls five, a little rounded; aperture small, columella strong, outer lip blunt-edged.

MONTAGU. Testacea Britannica, Vol. II. p. 35-7.

Rissoa vittata, Donovan.

Rissoa rupestris, Forbes.

Hab. British coasts.

Species 16. (Mus. Sowerby.)

RISSOA STRIATULA. *Ris. testā albā, brevī, spirāliter, prominenter, distanterque costatā, inter costas longitudinaliter striatā; anfractibus quatuor, ultimo magno, ad medium tenuiter costato, supernè prope suturam angulatim pinnulato; aperturā brevī, labio crenulato.*

THE LITTLE STRIATED RISSOA. Shell white, short, spirally, prominently, and distantly ribbed, longitudinally striated between the ribs; whorls four, last large, finely ribbed at the middle, angularly flattened above near the suture; aperture short, lip crenulated.

MONTAGU. Testacea Britannica. Vol. II. p. 306, Pl. X. f. 5.

Turbo carinatus, Da Costa.

Turbo mollis, Fleming.

Hab. British coasts.

Beautifully sculptured with thread-like striae cross- ing prominent keel-like spiral ribs.

Species 17. (Mus. Sowerby.)

RISSOA SPIRATA. *Ris. (Rissoian) testā albā, turrētā, spirāliter tenuiter striatā; anfractibus novem, sex superioribus brevibus abruptè versus apicem acuminatum acclivibus, longitudinaliter costatis, tribus inferioribus elevatis, levissimè subcylindricis; suturā profundè incisā; aperturā subpyriformi, labio externo expanso crassiusculo.*

THE SPIRED RISSOA. Shell white, turreted, spirally finely striated; whorls nine, six upper short.

abruptly sloped towards an acuminate apex, longitudinally ribbed, three lower raised, rather smooth, subcylindrical; suture deeply incised; aperture rather pyriform, outer lip expanded, rather thick.

SOWERBY. Genera of Recent and Fossil Shells.

Hab. Philippines.

Species 18. (Mus. Sowerby.)

RISSOA PROXIMA. *Ris. testā albā, minutā, tenui, ovato-oblongā, spirāliter densè striatā; anfractibus quinque, inflatis, gradatim crescentibus; aperturā ovatā, marginè acuto, simplici.*

THE APPROXIMATE RISSOA. Shell white, minute, thin, ovate-oblong, spirally closely striated; whorls five, inflated, gradually increased; aperture ovate, margin simple.

ALDER MS. Thomson, Ann. Nat. Hist. Vol. XX. p. 174.

Rissoa virginea, Brown.

Hab. Ireland, very rare.

Differing from *Rissoa vitrea* in being striated spirally and in the proportionate equality of increase in the whorls.

Species 19. (Mus. — ? Copied.)

RISSOA VITREÆ. *Ris. testā parvā, albā, tenui, semipellucidā, ovato-oblongā, levigatā; anfractibus quinque, inflatis, penultimo magno elevato; aperturā ovatā, marginè acuto, simplici.*

THE GLASSY RISSOA. Shell small, white, thin, semipellucid, ovate-oblong, smooth; whorls five, inflated, the last large, elevated; aperture ovate, margin sharp, simple.

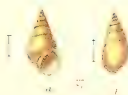
MONTAGU. Testacea Britannica, Vol. II. p. 351.

Rissoa glabrata, Megherle.

Rissoa crystallina, Brown.

Hab. Exmouth, Oban, &c.

The penultimate whorl is very large in proportion to the others.



RISSOA.

PLATE III.

Species 20. (Mus. Sowerby.)

RISSOA COSTATA. *Ris. testâ subpyramidalâ, subventricosa, fulvâ; anfractibus sex, prope suturam angulatis, oblique costatis, spirâlibus striatis; ultimo infâ subarcuato; aperturâ subquadratâ, columellâ rectiusculâ.*

THE RIBBED RISSOA. Shell rather pyramidal, rather ventricose, fulvous; whorls six, angular near the suture, obliquely ribbed; spirally striated, last slightly keeled beneath; aperture rather square, columella rather straight.

ADAMS. TRANS. LIN. SOC. VOL. VIII. PL. XIII. f. 13, 14.

Turbo costatus, Montagu.

Turbo plicatus, Mühlfeld.

Rissoa plicata, Michaud.

Hab. Britain.

Species 21. (Mus. — ? Copied.)

RISSOA VENTRICOSA. *Ris. (Hydrobia) testâ subpyramidalâ, levigatâ, pallidâ fulvâ; anfractibus quinque, rotundis; ultimo cœtriviro, leviter umbilicato; aperturâ magna, columellâ rectiusculâ, labio externo tenui.*

THE VENTRILOSE RISSOA. Shell subpyramidal, smooth, pale fulvous; whorls five, rounded: last ventricose, slightly umbilicated; aperture large, columella rather straight, outer lip thin.

DE MOULINS. Bulletin de la Société Philosophique de Paris, p. 8. Pl. I. f. 2.

Hab. Mediterranean.

Species 22. (Mus. Sowerby.)

RISSOA LACTEA. *Ris. (Mearns) testâ albâ, ovatâ, costellis numerosis, rotundis, crenulatis, spirâlibus, superâ costâ longitudinalibus sculptâ; spirâ parvâ; ultimo anfractu et aperturâ magnis, subovatis.*

THE MILK-WHITE RISSOA. Shell white, oval, sculptured with numerous rounded, crenulated, spiral riblets, and above with longitudinal ribs; spire small; last whorl and aperture large, ovate.

MICHAUD. Espèces de Rissoa, p. 9, f. 11, 12.

Rissoa cancellata, Recluz.

Species 23. (Mus. — ? Copied.)

RISSOA ABYSSICOLA. *Ris. (Mearns) testâ subovatâ, albâ, superâ costâ, inter costas profundè striatâ, ad partem inferiorem ultimâ anfractibus spirâlibus costatâ, spirâ subpyramidalâ, ultimo anfractu magno; aperturâ latâ, labio crasso, rotundo.*

THE DEEP-SEA RISSOA. Shell rather ovate, white, ribbed above, deeply striated between the ribs, spirally ribbed at the lower part of the last whorl, spire somewhat pyramidal, last whorl large; aperture broad, lip thick, round.

FORBES. Brit. Moll. p. 86, Pl. LXXVIII. f. 1.

Hab. North Scotland.

Species 24. (Mus. Sowerby.)

RISSOA COELEX. *Ris. (Rissoina) testâ albâ, solidâ, pyramidalâ, costis nodosis spirâlibus et longitudinalibus cancellatâ, inter costas foveolatâ; spirâ elongatâ, subrotundâ, apice obtuso, anfractibus quinque, penultimo tumido; aperturâ ovatâ, infâ canaliculatâ, labio crasso, crenulatâ.*

THE COELEX RISSOA. Shell white, solid, pyramidal, cancellated with nodose spiral and longitudinal ribs, pitted between the ribs; spire elongated, rather tortuous, apex blunt; whorls five, last but one tumid; aperture ovate, with a channel below, lip thick, crenulated.

D'ORNIERY. Mollusques de l'île de Cuba.

Hab. Coast of Cuba.

Species 25. (Mus. Sowerby.)

RISSOA CIMICOIDES. *Ris. (Mearns) testâ albâ, subfusiformi; spirâlibus prominenter costatâ (interstitiis profundis), superâ medium longitudinaliter callosissimè crenulatis costatâ; spirâ acuminatâ; anfractibus supra suturam canaliculatis, ultimo*

RISSOA.—PLATE III.

tumido; aperturâ subrotundâ, superne prope suturam angulatâ.

THE BUG-SHAPED RISSOA. Shell white, subfusiform, spirally prominently ribbed, interstices deep; above the middle, longitudinally very strongly crenulately ribbed; spire acuminate; whorls channelled above the suture, last tumid in the middle, aperture rather rounded, angular near the suture above.

FORMES. Brit. Moll.

Hab. Britain.

Species 25.

RISSOA ZETLANDICA. *Ris. (Alvania) testâ ovato-subelongatâ, pallidè fulvâ, spirâ turrilâ, anfractibus subquadratis, validè nodoso-costatis, cancellatis; ultimo infra carinato; aperturâ brevi, subrotundâ, columellâ superne tumidâ, labio externo crasso, crenulato.*

THE ZETLAND RISSOA. Shell ovate, rather elongated, pale fulvous, spire turreted, whorls rather square, cancellated with strong nodose ribs, the last keeled below; aperture short, rather rounded; columella tumid above, outer lip thick, crenulated.

MONTAGU. Testacea Britannica. Mont. Trans. Linn.

Soc. Vol. XI. p. 194, Pl. XIII. f. 5.

Rissoa cyclostomata, Recluz.

Hab. Great Britain.

Species 27. (Fig. a, b, c, Mus. Sowerby.)

RISSOA ULVE. *Ris. (Hydrobia) testâ fulvâ, trochiformi, solidâ, levi, spirâ acuminatâ, elevatâ, anfractibus planiusculis, suturâ incisâ separatâ, ultimo leviter angulatâ; aperturâ ovalâ, labio interno integro.*

THE SEA-WEED RISSOA. Shell fulvous, trochus-shaped, solid, smooth; spire acuminate, raised; whorls

flattened, separated by an incised suture, last slightly angular; aperture ovate.

PENNANT. Brit. Zool. Ed. 4, Vol. IV. p. 132.

Rissoa subumbilicata, Berkeley.

Rissoa Barcei, Jeffreys.

Hab. British coasts.

Species 28. (Mus. Sowerby.)

RISSOA SEMISTRIATA. *Ris. (Cingula) purâ, fulvâ, maculis in seriebus, tribus costaceis, subquadratis cinctâ; spiraliter striatâ; anfractibus quinque, planiusculis; ultimo magno, superioribus levibus; aperturâ subtrigonâ.*

THE HALF-STRIATED RISSOA. Shell small, fulvous, banded with rather square chestnut spots in three rows; spirally striated; whorls five, rather flat, last large; upper smooth; aperture nearly trigonal.

MONTAGU. Testacea Britannica, Supp. p. 136.

Rissoa pulchra, Johnson.

Rissoa tristriata, Thompson.

Rissoa subulcata, Philippi.

Hab. Britain.

Species 29. (Mus. Marrat.)

RISSOA COSTULATA. *Ris. testâ fulvâ, subconicâ, costis magnis, distantibus, angulatis armatâ, spiraliter striatâ; spirâ acuminatâ, anfractibus sex, elevatis, angulatis; aperturâ subrotundâ, margine crasso.*

THE RIBBED RISSOA. Shell fulvous, rather conical, armed with large, distant, angular ribs; spirally striated, spire acuminate; whorls six, elevated, angular; aperture rather rounded, margin thick.

ALDER. As of Risso, Ann. Nat. Hist.

Rissoa similis, Scacchi Cat. p. 14, 2.

Rissoa Gnerinii, Rev. Zool. Cuv. 1843, p. 7.

Hab. Britain, France.

RISSOA.

PLATE IV.

Species 30. (Mus. Sowerby.)

RISSOA FORTIS.—*Ris. (Rissoina) testâ albidâ, crassâ, angustâ, elevatâ, medio tumidiâsculâ, costis rectis, crebris, lœvibus, sculptâ; anfractibus septem, altis, planatis; apice acuto; aperturâ parvâ, obliquâ, angustâ, infâ canaliculatâ; labio interno crasso, expanso.*

THE STRONG RISSOA. Shell whitish, thick, narrow, raised, rather tumid in the middle, sculptured, with straight, close, smooth ribs; whorls seven, high, flattened; apex sharp; aperture small, oblique, narrow, channelled below; outer lip thick, spread.

C. B. ADAMS.

Hab. Jamaica.

Species 31. (Mus. —?)

RISSOA MACULATA. *Ris. testâ minutâ, subtrochiformi, lævigatâ, fulvâ; anfractibus sex, rotundis, ultimo maculis subarcuatis versus suturam, subquadratis infâ, et fasciâ spirali castaneâ pictâ; aperturâ majusculâ, labio interno reflexo.*

THE SPOTTED RISSOA. Shell minute, subtrochiform, smooth, brown; whorls six, rounded, the last painted near the suture with spots slightly curved, below rather square, and a spiral band of chestnut; aperture rather large, inner lip reflected.

SOWERBY. Index of British Shells, as of an unnamed authority.

Rissoa inconspicua, var. auctorum.

Hab. Britain.

The pattern of colouring is so distinct that it may justify specific designation.

Species 32. (Mus. Marrat.)

RISSOA CRENULATA. *Ris. testâ albâ, brevî, turritâ, quadratum cancellatâ; anfractibus superiis prope suturam angulatis, penultimo ventricosâ, ultimo magno; aperturâ orbâ, margine externo crenulatâ.*

THE CRENULATED RISSOA. Shell white, short, tur-

reted, cancellated in squares; whorls angular above near the suture, penultimate ventricose, last large; aperture ovate, outer margin crenulated.

MICHAUD. Nouvelles Espèces de Rissoa, p. 15, f. 1, 2.

Turbo cancellatus, Da Costa.

Turbo cinereus, Donovan, &c., non Linnæus.

Hab. Britain and Channel Islands.

Cancellations broad, but not so much so as those of *Zetlandica*.

Species 33. (Mus. Marrat.)

RISSOA RUFLABRIS. *Ris. (Alvania) testâ trochiformi, fulvâ, ad suturam rufolincatâ; anfractibus angulatis, supra angulum distanter, leviter costatis; apice acuminato; aperturâ subtrigoniâ, margine rubro vel violaceo.*

THE RED-LIPPED RISSOA. Shell trochiform, fulvous, with a red line at the suture; whorls angular, distantly, slightly ribbed above the angle; apex acuminate; aperture rather trigonal, margin red or violet.

LEACH. (Alvania) Alder. Ann. Nat. Hist. Vol. XIII. p. 325.

Rissoa hyalina, Desmoulins.

Rissoa lilacina, Recluz.

Hab. Europe.

Species 34. (Mus. Hanley.)

RISSOA INCONSPICUA. *Ris. (Uingula) testâ conicâ, elevatâ, albâ, longitudinaliter costatâ, inter costas tenuissimè striatâ; anfractibus sex, lateraliter subcompressis; apice obtusâ; ultimo anfractâ infâ lævigatâ; aperturâ magnâ; columellâ rectissimâ.*

THE INCONSPICUOUS RISSOA. Shell conical, raised, whitish, longitudinally ribbed, very finely striated between the ribs; whorls six, rather compressed at the sides; apex obtuse; last whorl smooth below; aperture large; columella rather straight.

ALDER. Ann. and Mag. of Nat. Hist. Vol. XIII. p. 323, Pl. VIII. f. 6, 7.

Hab. Britain.

RISSEO.—PLATE IV.

Species 35. (Mus. Marrat.)

RISSEO PUNCTURA. *Ris. (Cingula) testâ ventricosâ, fulcâ, subconicâ, spiraliter puncturato-striatâ; anfractibus quinque, rotundis, suprâ infrâque maculis linearibus castaneis pictis; aperturâ subrotundâ.*

THE PUNCTURED RISSEO. Shell ventricose, fulvous, rather conical, spirally striated in punctures; whorls five, rounded, painted above and beneath with linear chestnut spots; aperture rather rounded.

MONTAGU. Testacea Britannica, Vol. II. p. 320, Pl. XII. f. 5.

Rissoa puncturata, Macgillivray.

Rissoa approximata, Brown.

Hab. British coasts.

Species 36. (Fig. a, b, Mus. Marrat.)

RISSEO PARVA. *Ris. testâ conicâ, lævi, fulcâ, acuminatâ, altâ; anfractibus rotundis, brevibus, lineis maculisque castaneis, frequenter curvis plerumque pictis; aperturâ subquadratâ, columellâ rectiusculâ.*

THE SMALL RISSEO. Shell conical, smooth, fulvous, acuminate, raised; whorls rounded, short, generally painted with chestnut lines and spots, frequently curved; aperture subquadrate, columella rather straight.

MAISON and RACKET. Act. Linn. Soc. VIII. p. 171.

Rissoa subultra, Adams.

Rissoa interrupta, Johnson.

Rissoa lactea, Donovan.

Hab. British coasts and Channel.

Species 37. (Mus. Hanley.)

RISSEO BEANII. *Ris. (Albania) testâ subconicâ, fuscâ, superne leviter costatâ, omnino spiraliter striatâ, striis ad costas crenulatis; spirâ acuminatâ; anfractibus sex, convexiusculis, ultimo breviusculo, aperturâ subovatâ, margine distincto, albo; labio externo albo.*

BEAN'S RISSEO. Shell rather conical, brown, slightly ribbed above, spirally striated all over, striae crenulated at the ribs; spire acuminate; whorls six, rather convex, last rather short; aperture rather oval, margin distinct, white; outer lip white.

HANLEY. Forbes and Hanley, British Mollusca, III. Pl. LXXXVIII. f. 1.

Hab. Great Britain and Ireland.

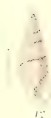
Species 38. (Mus. — ? Copied.)

RISSEO SUPRACOSTATA. *Ris. testâ brevi, pallidâ, ventricosâ; anfractibus quinque, rotundis, superioribus acutè costatis, inter costas striatis; ultimo magno, lævigato; spirâ acutâ, subrosâ; aperturâ magnâ, subovatâ.*

THE UPPER-RIBBED RISSEO. Shell short, pale, ventricose; whorls five, rounded, upper sharply ribbed, striated between the ribs, last large, smooth; spire sharp, rather rose-coloured; aperture large, subovate.

Hab. Britain.

This shell is evidently a somewhat abnormal form, but not of *R. parva*. Some author, however, having named it, it is here admitted, as it cannot be identified with any known species.

Risseea Pl V.

RISSEO.

PLATE V.

Fig. 10 b.

RISSEO CALATHISCUS, var. (See Pl. I.)

Species 39. (Mus. Sowb.)

RISSEO CALATHISCUS. *Ris.* (Acanthia) testâ subconicâ, pallidâ, semipellucidâ, costis longitudinalibus, subdistinctibus, subdepressis, et liris spiralibus magis approximatis, interstitiis profundè foveolatis, cancellatâ; anfractibus quinque convergentibus; aperturâ subovatâ; labio externo crasso, intus crenato.

THE BASKET RISSEO. Shell rather conical, pale, semipellucid, cancellated with rather distant, rather depressed longitudinal ribs and rather nearer spiral ridges, with deeply-pitted interstices; whorls five, rather convex; aperture rather ovate, outer lip thick, crenated within.

FORBES and HANLEY. British Mollusca, Vol. III. p. 80.

Hab. British coasts and Europe generally.

Species 40. (Mus. Sowerby.)

RISSEO STRIATA. *Ris.* (Anoba) testâ albidâ, elongatâ, tenuiter spiraliter striatâ; anfractibus sex, convexis, elevatis, supernè ad suturam crenulatis, ultimo brevi; aperturâ parvâ, labio externo extus varicoso, margine incrassato, subcrenulato.

THE STRIATED RISSEO. Shell whitish, elongated, finely striated spirally; whorls six, convex, raised, crenulated above at the suture, last short; aperture small, outer lip varicose without, margin thickened and slightly crenulated.

MONTAGU. (Turbo) Test. Brit. Vol. II. p. 326, Pl. XIII. f. 25, 26.

Risseo minutissima, Michaud.

Risseo communis, Forbes.

Risseo gracilis, Macgillivray.

Hab. Britain.

Species 41. (Mus. Marrat.)

RISSEO VENTROSA. *Ris.* testâ subcitrili, fulvescenti, pyramidatâ, spirâ elevatâ; anfractibus quinque, lateraliter compressis, ultimo rotundo, ferè umbilicato, aperturâ subovatâ, margine acuto.

THE INFLATED RISSEO. Shell rather greenish-buff, pyramidal, spire elevated; whorls five, laterally compressed, last round, nearly umbilicated; aperture rather oval, margin acute.

MONTAGU. (Turbo) Test. Brit. II. p. 317, Pl. XII. f. 13.

Risseo acuta, Draparnaud.

Turbo ventricosus, Dillwyn.

Hab. Great Britain, France.

Species 42. (Mus. late Deshayes.)

RISSEO ROSEA. *Ris.* testâ solidâ, rosâ, spirâ elevatâ, anfractibus septem, moderatè convexis, longitudinaliter costatis, costis regularibus, solidis, levibus, crenatis, interstitiis æquantibus; aperturâ auriformi, columellâ leviter uniplicatâ, labio externo crasso, rotundo.

THE PINK RISSEO. Shell solid, pink, spire elevated; whorls seven, moderately convex, longitudinally ribbed, ribs regular, solid, smooth, rather straight, equalling the interstices; aperture auriform, columella slightly single-plaited, outer lip thick, rounded.

DESHAYES. Conch. Ile de la Réunion, p. 61, Pl. VII.

f. 29.

Hab. Isle of Bourbon.

Species 43. (Mus. late Deshayes.)

RISSOA INSOLITA. *Ris.* (*Alvania* ?) *testâ minimâ, candidâ, elongato-turrâ, apice obtusiusculâ; anfractibus septenis, costis duabus inaequalibus prominentibus cinctis, majore prope suturam positâ, eleganter granuloso-crenulatâ; ultimo anfractu brevissimo, transversim quadricostato; aperturâ minimâ, ovatâ, angustâ.*

THE EXTRAORDINARY RISSOA. Shell very small, white, elongate-turreted, apex rather obtuse; whorls seven, gilt with two unequal prominent ribs, the larger placed near the suture, elegantly granularly crenulated, last whorl rather short, transversely four-ribbed; aperture very small, oval, narrow.

DESHAYES. Conch. Ile de la Réunion, p. 63, Pl. XIII.

f. 15, 16.

Hab. Isl. Bourbon.

Species 44. (f. a, b, Mus. Crosse ?)

RISSOA GENTILISSIMA. *Ris.* (*Hydrobia*) *testâ parvâ, pallidâ fuscâ, levi, ovatâ, apice obtuso; anfractibus quatuor, convexiusculis, ultimo elongato, inflato, subsoluto; aperturâ disjunctâ, obliquè ovatâ, operculo fusco.*

THE FAMILY-RELATION RISSOA. Shell small, pale fulvous, smooth, with obtuse apex; whorls four, rather convex, last elongated, inflated, a little uncoiled; aperture disjoined, obliquely ovate.

CROSSE. Journ. de Conch. Vol. XXII. p. 112, 1874.

Hab. New Caledonia.

Mr. Crosse remarks that this is the second of the same genus found in the locality.

Species 45. (Mus. Souverbie ?)

RISSOA FIMBRATA. *Ris.* (*Rissoina*) *testâ albidâ, turrâ, altissimâ, levi, apice obtuso; anfractibus octo,*

lateraliter compressis, distanter longitudinaliter costatis, prope suturam subangulatis; aperturâ obliquè ovatâ, columellâ duplicatâ, labio externo duplicato, fimbriato.

THE FRINGED RISSOA. Shell whitish, turreted, very high, smooth, with blunt apex; whorls eight, laterally compressed, distantly longitudinally ribbed, with a slight angle near the suture; aperture obliquely ovate, columella doubled, outer lip doubled, fringed.

SOVERBIE. Journ. de Conch. p. 52, 1872.

Hab. New Caledonia.

Species 46. (Mus. Souverbie ?)

RISSOA INCERTA. *Ris.* (*Rissoina*) *testâ fuscâ, solidâ, altâ, turrâ, spirâ elevatâ, apice obtuso; anfractibus octo, ad suturam angulatis, costatis, costis ad spiram continuis, distantibus, rotundis, ad medium ultimi anfractis discontinuis; aperturâ obliquè ovatâ, columellâ arenatâ.*

THE UNCERTAIN RISSOA. Shell brown, solid, elevated, turreted, spire raised, with obtuse apex; whorls eight, angular at the suture, ribbed, ribs continued at the spire, distant, rounded, discontinued at the middle of the last whorl; aperture obliquely ovate.

SOVERBIE. Journ. de Conch. 1872, p. 33, Pl. I. f. 4.

Hab. Ins. Arl. New Caledonia.

Species 47. (Mus. Marrat.)

RISSOA PULCHERRIMA. *Ris.* (*setia*) *testâ minutâ, brevi, globosâ, levi, subumbilicatâ, in scriebus tribus maculis rubro-fuscis quadratis ornatâ; anfractibus quatuor, rotundis, ultima magna, ventricoso; aperturâ rotundâ, margine simplici.*

THE VERY PRETTY RISSOA. Shell minute, short, globose, smooth, slightly umbilicated, ornamented with red-brown square spots in three rows; whorls four, rounded, last large, ventricose; aperture round, margin simple.

JEFFREYS. Ann. Nat. Hist. Vol. II. p. 351.

Hab. Channel Islands.



RISSOA.

PLATE VI.

Fig. 1 b, *Rissoa denticulata*. See Plate I.

Species 48. (Mus. Sowerby.)

RISSOA SOLUTA. *Ris. (Setia) testā minūtā, ovatā, albā, spirāliter striatā; anfractibus tribus, brevibus, rotundis, ultimo ventricoso, subsoluto, umbilicato; aperturā rotundā, labio externo rectiusculo.*

THE LOOSE-COILED RISSOA. Shell very small, oval, white, spirally striated; whorls three, short, round, last ventricose, a little uncoiled, umbilicated; aperture round, outer lip rather straight.

PHILIPPI. Moll. Sic. Vol. II. p. 130, Pl. XXIII. f. 18.
Hab. Britain.

Species 49. (Mus. Jeffreys.)

RISSOA ALDERI. *Ris. (Setia) testā minūtā, pallidā, fuleā, levī, subovatā; anfractibus quinque, rotundis, elevatis, ultimo ventricoso, subumbilicato; aperturā subovatā, labio externo tenui, columellā rectiusculā.*

ALDER'S RISSOA. Shell minute, pale, fulvous, smooth, rather oval; whorls five, rounded, elevated, last ventricose, slightly umbilicated; aperture rather oval, outer lip thin, columella rather straight.

JEFFREYS. Ann. and Mag. of Nat. Hist. August, 1858.
Hab. North Britain.

Species 50. (Mus. Sowerby.)

RISSOA FULGHA. *Ris. (Setia) testā minūtā, fuleā, brevī, nitentē, castaneo spirāliter bifasciatā, spirā levī, obtusā; anfractibus tribus, rotundis; aperturā rotundā, margine tenui.*

THE BRIGHT RISSOA. Shell minute, fulvous, smooth, shining, with two chestnut spiral bands, spire short, obtuse; whorls three, rounded; aperture rounded, margin thin.

ADAMS. Trans. Linn. Soc. Vol. III. p. 254.
Hab. Britain and Ireland.

Species 51. (Mus. Brit.)

RISSOA ANATINA. *Ris. (Hydrobia) testā minūtā, subcylindricā, tenui, ovato-subglobosā, spirā brevī, apice acuto; anfractibus quinque, rapidē crescentibus, distinctis, prope suturam angulatis, ultimo subgloboso, suturā canaliculatā; aperturā subrotundā, marginē tenui.*

THE DUCK'S RISSOA. Shell small, rather green, thin, ovato-subglobose, spire short, apex acute; whorls five, rapidly increased, distinct, angular near the suture, last subglobose, suture channelled; aperture rather round, margin thin.

DRAPARNAUD. Moll. Terr. et Fluv. de France, p. 37.
Pl. I. f. 24, 25.

Hab. France, England.

Species 52. (Mus. Jeffreys.)

RISSOA EXIMA. *Ris. testā albidā, minutissimā, subovatā, longitudinaliter costatis, costis distantibus, incisīs, in medio anfractuum costis spirālibus tribus decessatis, interstitiis excavatis; anfractibus quatuor, infusā biangulatis, suturā profundā; aperturā subrotundā, margine acuto.*

THE NOTABLE RISSOA. Shell whitish, very small, somewhat ovate, longitudinally ribbed, ribs distant, incised, decessated by three spiral ribs in the middle of each whorl; interstices excavated; whorls four, biangular below, suture deep; aperture rather round, margin sharp.

JEFFREYS. Sowerby's Illustrated Index of Brit. Sp. *Chenaultzia Barleci*, Clark.

Hab. Britain.

Species 53. (Mus. Sowerby.)

RISSOA NITIDA. *Ris. (Nissina) testā albā, solidā, elatā, spirā elongatā, medio subinglata, apice acuminato; anfractibus octo, convexis, spirāliter et longitudinaliter costatis, costis ad angulos nodosis; aperturā*

RISSOA.—PLATE VI.

parvâ, anticâ canaliculatâ, columellâ brevi, crassâ, labio externo crasso, anticâ producto.

THE NEAT RISSOA. Shell white, solid, raised, spire elongated, rather swelled in the middle, apex acuminate; whorls eight, convex, spirally and longitudinally ribbed, ribs nodose at the angles; aperture small, anteriorly channelled, columella short, thick, outer lip thick, anteriorly produced.

A. ADAMS. Proc. Zool. Soc. 1851, p. 266.

Hab. Philippines.

Species 54. (Mus. Sowerby.)

RISSOA RUBRA. *Ris. (Barleia) testâ conicâ, fusâ, solidâ, politâ; anfractibus quatuor, convexiusculis, ultimo infra medium subangulato; aperturâ subtrigoniâ, magnâ, columellâ rectiusculâ.*

THE RED RISSOA. Shell conical, brown, solid, polished; whorls four, rather convex, last rather angular below the middle; aperture subtrigonal, large, columella rather straight.

ADAMS. Trans. Linn. Soc. Vol. III. Pl. XIII. f. 15.

Rissoa unifasciata, Montagu.

Hab. Britain, Mediterranean.

Species 55. (Mus. Marrat.)

RISSOA FULVA. *Ris. (Barleia ?) testâ conicâ, elevatâ, solidâ, fusâ, latè fasciatâ, politâ; anfractibus*

quinque, lateraliter compressis, ultimo angulato; aperturâ subtrigoniâ.

THE FULVOUS RISSOA. Shell conical, raised, solid, brown, broadly banded, polished; whorls five, laterally compressed, last angular; aperture subtrigonal.

MICHAUD. Nouv. Esp. de Rissoa, p. 15, f. 17, 18.

Hab. Adriatic.

Species 56. (Mus. Marrat.)

RISSOA CREBRISULCATA. *Ris. (Rissoina) testâ elongato-ovatâ, scabrâ, costis longitudinalibus subobliquis, validis, nodosis, et liris tenuibus spiralibus cancellatâ; anfractibus octo, convexiusculis; aperturâ infriâ canaliculatâ; aperturâ parvâ, ovatâ columellâ crassâ, brevi, labio externo crasso, costis crenato.*

THE CLOSE-GROOVED RISSOA. Shell elongated-ovate, scabrous, cancellated with rather oblique, strong, nodulous, longitudinal ribs; whorls eight, rather convex; aperture channelled below, aperture small, ovate; columella thick, short, outer lip thick, crenulated outside.

SOWERBY.

Hab. ——— ?

This beautifully sculptured little shell when received was labelled '*R. canaliculata* Ad.,' but being afterwards found not to agree with the specimen in the British Museum, we have had to give another name to it.



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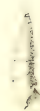
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RISSOA.

PLATE VII.

Species 57. (Mus. Paris.)

RISSOA MOHRENSTERNI. *Ris. (Rissoina) testâ minimâ, albâ, ovato-pyramidalâ, apice acuto; anfractibus septem, concavisculis, longitudinaliter costellatis, striis spiralibus decussatis; ultimo anfractu magno, ventricoso, subovato; aperturâ semilunari, labio externo crasso, antice producto.*

MOHRENSTERN'S RISSOA. Shell very small, white, ovately pyramidal, with acute apex; whorls seven, rather convex, longitudinally ribbed, decussated with spiral striae; last whorl large, ventricose, subovate; aperture semilunar, outer lip thick, anteriorly produced.

DESHAYES. Conchyliologie de l'île de la Réunion, p. 62.

Hab. Ile Bourbon.

Species 58. (Mus. Brit.)

RISSOA SEMIGLABRATA. *Ris. (Rissoina) testâ pyriformi, solidâ, acuminatâ, anfractibus septem, concavisculis, superioribus curvicostratis, penultimo et antepenultimo costellis indistinctis spiralibus et striis minutissimis longitudinalibus decussatis, ultimo subgloboso, pulito, aperturâ pyriformi, labio externo crasso, dentibus transversis tribus vel quatuor minuto.*

THE HALF-POLISHED RISSOA. Shell pyriform, solid, acuminate, whorls seven, rather convex, the upper with curved ribs, two before the last decussated with indistinct spiral ribs and very minute longitudinal striae, last rather globose, polished, aperture pyriform, outer lip thick, provided with three or four teeth.

A. ADAMS. Proc. Zool. Soc. 1851, p. 279.

Hab. Isl. Zebu, Philippines.

Species 59. (Mus. Brit.)

RISSOA CRASSILABRUM. *Ris. (Rissoina) testâ brevi, conicâ, lacteiâ, politâ, solidâ, anfractibus sex, planulatis, apice acuminato; aperturâ pyriformi,*

angustâ, labio externo crasso, planulato, antice tridentato, columellâ latâ.

THE THICK-LIP'D RISSOA. Shell short, conical, milk-white, polished, solid, whorls six, flattened, apex acuminate; aperture pyriform, narrow, outer lip thick, flattened, anteriorly tridentate, columella broad.

PEASE. Proc. Zool. Soc.

Hab. California.

A curious little shell with three strong teeth across its broad, thick, outer lip.

Species 60. (Mus. Brit.)

RISSOA CANALICULATA. *Ris. (Rissoina) testâ solidâ, pyramidalâ, pallidissimè fulvâ, anfractibus septem, concavisculis, costatis; costis distantibus, loricibus medio flexuosis, ad costam spiralem basalem terminantibus; ultimo anfractu infusato; aperturâ pyriformi, labio externo crasso.*

THE CHANNELLED RISSOA. Shell solid, pyramidal, very pale fulvous; whorls seven, rather convex, ribbed; ribs distant, smooth, flexuous in the middle, ending at the base, last whorl double ribbed beneath; aperture pyriform, outer lip thick.

SCHWARTZ. Monograph of Rissoinae.

Hab. Philippines.

Species 61. (Mus. Brit.)

RISSOA INSIGNIS. *Ris. (Rissoina) testâ brevi, solidâ, superne albâ, infus subaureâ; anfractibus quinque superioribus latis, quadratis, prope suturam rectangulatis, costatis, subdecussatis, ultimo rotundo, subgloboso; aperturâ subovata, labio externo crasso, rotundo, denticulato, columellâ crassâ.*

THE WONDERFUL RISSOA. Shell short, solid, white above, rather golden below; whorls five, upper broad, square, rectangular near the suture, ribbed, slightly decussated, last round, subglobose; aperture subovate; outer lip thick, round, denticulated, columella thick.

ADAMS and REEVE. Voy. Samarang.

Hab. — ?

RISSEA.—PLATE VII.

Species 62. (Mus. Brit.)

RISSEA DESHAYESIANA. *Ris. (Rissoina) testâ albâ, pyramidalâ, costis longitudinalibus nodosis et striis spiralibus tenuiter reticulatâ; anfractibus septem, convexiusculis; aperturâ semiovatâ, columellâ brevi, crassâ, labio externo crasso, crenulato.*

DESHAYES'S RISSEA. Shell white, pyramidal, finely reticulated with longitudinal nodose ribs and spiral striæ; whorls seven, rather convex; aperture semioval, columella short, thick, outer lip thick, crenulated.

RECLUS. *Revue Zoologique.*

Hab. — ?

Species 63. (Mus. Brit.)

RISSEA DEFORMIS. *Ris. (Rissoina) testâ albâ, elongatâ, solidiusculâ, altissimâ; anfractibus novem, irregulariter convolutis, inæqualiter convexis, superioribus sculptis, inferioribus levigatis, aperturâ subtrigonâ, productâ; labio externo crasso.*

THE DEFORMED RISSEA. Shell white, long, rather solid, much elevated; whorls nine, irregularly wound, unequally curved, upper sculptured, lower smooth, aperture subtrigonal, produced; outer lip thick.

SOWERBY. *Genera of Shells.*

Hab. Philippines.

Species 64. (Fig. a, b, c, d, Mus. Brit.)

RISSEA VARIEGATA. *Ris. (Rissoina) testâ subcylindricâ, albâ, vel maculis vel fasciis variè pictâ; anfractibus rectiusculis, supernè ad suturam crenulatis, ultimo majusculo, apice acuminato, aperturâ semiovatâ, columellâ brevi, acuminatâ.*

THE VARIEGATED RISSEA. Shell rather cylindrical, white, or variously painted with spots or bands; whorls rather straight, crenulated above at the suture, last rather large; apex acuminate, aperture semioval, columella short, acuminate.

ANGUS. *Proc. Zool. Soc.* 1867, p. 113.

Hab. Port Jackson.

Species 65. (Mus. Brit.)

RISSEA STRIOLATA. *Ris. (Rissoina) testâ elevatâ, tenui, tenuiter striatâ, albâ, apice acuminato; anfractibus novem, rectiusculis, medianis latis, superioribus attenuatis; ultimo subangustato; aperturâ auriformi, columellâ infrâ acuminatâ; labio externo subincrassato.*

THE FINE-STRIATED RISSEA. Shell raised, thin, finely striated, white, apex acuminate; whorls nine, rather straight, middle broad, upper attenuated, last rather narrow; aperture ear-shaped, columella acuminate below; outer lip rather thickened.

A. ADAMS. *Proc. Zool. Soc.* 1851, p. 206.

Hab. Baclayon, Isl. Bohol, Philippines.

In some degree resembling *Rissoina spirata*, but the whorls not angular.



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RISSEA.

PLATE VIII.

Species 66. (Mus. Brit.)

RISSEA PYRAMIDALIS. *Ris. (Rissoina) testâ subpupariformi, pallidè fulvâ, subventricosâ, obtusiusculâ; anfractibus sex, breviusculis, costis eleganter flexuosis, longitudinalibus levibus liris; aperturâ subauriformi, labio externo crasso, columellâ subplicatâ.*

THE PYRAMIDAL RISSEA. Shell somewhat pupa-shaped, pale fulvous, rather ventricose, rather obtuse; whorls six, rather short, ridged with elegantly flexuous longitudinal ribs; aperture somewhat ear-shaped, outer lip thick, columella with a very slight plait.

A. ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Bacayon, Isl. Bohol, Philippines.

Species 67. (Mus. Brit.)

RISSEA MEMBRANACEA. *Ris. testâ tenui, cornuâ, altissimâ; anfractibus septem, lateraliter subcompressis, apicalibus attenuatis, ultimo brevi; aperturâ auriformi, anticè expansâ, subretrorsâ, columellâ subflexuosâ, brevi, labio externo expanso.*

THE MEMBRANOUS RISSEA. Shell thin, horny, very elevated; whorls seven, laterally subcompressed, apical attenuated, last short; aperture ear-shaped, anteriorly expanded, rather inclined backwards, columella rather flexuous, short, outer lip expanded.

LÖVEN — ?

Rissoia labiosa var. Auct.

Hab. Black Sea and Mediterranean.

The more elevated varieties of *Rissoia labiosa* do not seem to approach the slender form and light texture of this species.

Species 68. (Mus. Brit.)

RISSEA SMITHII. *Ris. (Rissoina) testâ albâ, parvâ, solidâ, pyramidatâ; anfractibus septem, convexis,*

costatis, costis longitudinalibus, leviter arcuatis, interstitiis spiraler striatis, ultimo anfractu infriâ spiraler costatâ; aperturâ subtrigonâ, labio externo crasso, columellâ crassâ, obtusè uniplicatâ.

SMITH'S RISSEA. Shell white, small, solid, pyramidal; whorls seven, convex, ribbed, longitudinal ribs, slightly curved, interstices spirally striated, last whorl spirally ribbed below; aperture somewhat trigonal, outer lip thick, columella thick, with a blunt plait.

ANGUS. Proc. Zool. Soc. 1867, p. 114.

Hab. Port Jackson, Australia.

Species 69. (Mus. Brit.)

RISSEA TURRICULA. *Ris. (Rissoina) testâ rubrofuscâ, parvâ, solidâ, pyramidatâ, acuminatâ; anfractibus octo, prominentibus, supra medium subangulatis, costatis, costis paucis medio subangulatis, interstitiis tenuissimè striatis; aperturâ semilunari, labio externo crasso, columellâ crassâ, brevi.*

THE LITTLE TURRET RISSEA. Shell red-brown, small, solid, pyramidal, acuminate; whorls eight, prominent, rather angular above the middle, with interstices very finely striated; aperture semilunar, outer lip thick, columella very thick, short.

ANGUS. Proc. Zool. Soc.

Hab. New South Wales.

The whorls are more prominent than those of *Rissoia Smithii*, and, with the ribs, more angular.

Species 70. (Mus. Brit.)

RISSEA CRASSA. *Ris. (Rissoina) testâ solidâ, rubro-fulvâ, brevi, obtusâ; anfractibus septem, brevibus, lateraliter subcompressis, longitudinaliter costatis, costis leviter arcuatis, ultimo anfractu infriâ levigato; aperturâ rectiusculâ, columellâ crassâ, brevi.*

THE THICK RISSEA. Shell solid, red fulvous, short, obtuse; whorls seven, short, laterally rather

RISSOA.—PLATE VIII.

compressed, longitudinally ribbed, ribs slightly arched, last whorl smooth below; aperture rather straight, columella thick, short.

ANGUS. MS. Brit. Mus.

Hab. Port Jackson.

Species 71. (Mus. Brit.)

RISSOA CINCTA. *Ris. (Rissoina) testâ parvâ, albâ, altâ, tenuiter interruptim costato fasciatâ; anfractibus septem, convexiusculis, costatis, costis eleganter flexuosis, interstitiis striatis, ultimo anfractu brevî, rotundo, subreticulato.*

THE BELTED RISSOA. Shell small, white, high, finely interruptedly banded with chestnut; whorls seven, rather convex, ribbed, ribs elegantly flexuous, interstices striated, last whorl short, rounded, rather reticulated.

ANGUS. Proc. Zool. Soc. 1867, p. 114.

Hab. Port Jackson.

Species 72. (Mus. Brit.)

RISSOA NODICINCTA. *Ris. (Rissoina) testâ albâ, solidâ, pyramidalâ, acuminatâ; anfractibus octo, costellis spiralibus et longitudinalibus regulariter ad angulâ nodosis ornatis; aperturâ semicicatâ, labio externo crasso, intus crenulato.*

THE BEAD-BELTED RISSOA. Shell white, solid, pyramidal, acuminate; whorls eight, ornamented with spiral and longitudinal ribs, regularly nodose at the angles; aperture semi-ovate, outer lip thick, crenulated within.

A. ADAMS. Proc. Zool. Soc. 1851, p. 266.

Hab. Isl. Capul, Philippines.

Species 73. (Mus. Brit.)

RISSOA MONOPOSTA. *Ris. (Rissoina) testâ brevî, crassâ, lilacinâ et albâ, subpyriformi; anfractibus*

quinque, brevibus, ultimo subovato; aperturâ ovatâ, labio externo crasso, subplanulato, columellâ brevî, unidentatâ.

THE SINGLE-TOOTHED RISSOA. Shell short, thick, lilac and white, rather pyriform; whorls five, short, last rather oval; aperture ovate, outer lip thick, rather flattened, columella short, with a single tooth.

BIVON. MS. Mus. Brit.

Hab. —?

Species 74. (Mus. Sowerby.)

RISSOA VIOLACEA. *Ris. testâ parvâ, crassâ, breviter pyramidalâ, infusâ aureo-fulvâ, medio violaceâ; anfractibus quinque, supernè albis, infusâ costaneo latè fasciatâ; aperturâ subtrigonâ; marginem crasso.*

THE VIOLET RISSOA. Shell small, thick, shortly pyramidal, golden brown below, violet in the middle; whorls five, white above, broadly banded with chestnut below; aperture subtrigonal, margin thick.

DESMAREST. — ?

Hab. Nice.

Species 75. (Mus. Sowerby.)

RISSOA RETICULATA. *Ris. (Rissoina) testâ albâ, pyramidalâ, tenui, acuminatâ; anfractibus novem, costis tenuissimis, eleganter flexuosis, longitudinalibus et striis spiralibus reticulatis; aperturâ subpyriformi, labio externo crasso, anticò producto, columellâ brevî, infusâ acuminatâ.*

THE RETICULATED RISSOA. Shell white, pyramidal, thin, acuminate; whorls nine, reticulated with elegantly flexuous longitudinal ribs and spiral striae; aperture subpyriform, outer lip thick, anteriorly produced, columella short, acuminate below.

OWERBY. Genera of Shells.

Hab. Isl. St. Thomas, West Indies.



RISSOA.

PLATE IX.

Species 76. (Mus. Sowerby.)

RISSOA CLATHRATA. *Ris. (Rissoina) testâ albidâ, clatâ, solidâ, costis spiralibus supra suturam quinque et longitudinalibus parvâ magis numerosis ad angulos nodosis clathratis; interstitiis profundè foveolatis; anfractibus altis, convexisculis, ultimo unisulcato et varicoso; apertura pyriformi, labio externo antice producto; columelli brevi, crassi.*

THE LATTICED RISSOA. Shell whitish, elevated, solid, latticed with five spiral ribs above the suture, and rather more numerous longitudinal ones, nodose at the angles; interstices deeply pitted; whorls elevated, rather convex, the last with a groove and spiral varices behind the columella; aperture pyriform, outer lip anteriorly produced, columella short, thick.

A. ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Isl. Bohol, Philippines.

A beautiful broadly-sculptured species.

Species 77. (Fig. a, b, c, d, Mus. Brit.)

RISSOA VARIABILIS. *Ris. testâ subfusiformi, acuminatâ, tenuiter spiralliter fusco, punctato-lineatâ, et striatâ; anfractibus octo, elevatis, tribus apicalibus levibus, alteris medio angulatis, costatis, costis medio prominentibus; apertura declivi, subovatâ, margine expanso, lilacino, callos intusque incrassata.*

THE VARIABLE RISSOA. Shell rather fusiform, acuminate, finely spirally brown spot-lined and striated; whorls eight, elevated, three apical smooth, the others angular in the middle; aperture sloped, rather oval, margin expanded, lilac, thickened within and without.

MUEHLEBOLD — ?

Hab. — ?

Species 78. (Mus. Sowerby.)

RISSOA DECUSSATA. *Ris. (Rissoina) testâ albâ, solidâ, altâ, tenuissimè costellis obliquis longitudinalibus et spiralibus minutis decussatâ, apice obtuso; anfractibus sex, infra medium convexisculis; aper-*

turâ subpyriformi; columelli brevi, attenuatâ, labio externo prominenti, crasso.

THE DECUSSATED RISSOA. Shell white, solid, high, very finely decussated with oblique longitudinal ribs and spiral striae, apex obtuse; whorls six, rather convex below the middle; aperture rather pyriform, columella short, attenuated, outer lip prominent, thick.

MONTAGU. Test. Brit. Vol. II, p. 399.

Hab. West Indies.

A West Indian shell described as British by Montagu. It has a smooth, and even a polished appearance until examined with the lens, when the oblique longitudinal ribs and fine spiral striae are seen.

Species 79. (Mus. Sowerby.)

RISSOA SPLENDIDA. *Ris. testâ breviter subfusiformi, fulvâ, spiralliter lineis rubris punctatis pictâ; spirâ acuminatâ; anfractibus sex, brevibus, angulatum costatis, inter et infra costas fusco fasciatis; apertura brevi, labio externo intus callosque crasso violaceo marginato.*

THE SPLENDID RISSOA. Shell shortly subfusiform, fulvous, spirally painted with red punctured lines, spire acuminate; whorls six, short, angularly ribbed, banded with brown between and under the ribs; aperture short, outer lip thickened within and without, edged with violet.

ERICSSON — ?

Hab. Black Sea.

Shorter and more finely ribbed than *Rissoa variabilis*.

Species 80. (Mus. Sowerby.)

RISSOA SAGRIANA. *Ris. (Rissoina) testâ albâ, solidâ, altâ, pyramidalâ; anfractibus septem, costis crenatis, obliquis, transversè latis, sculptis; apertura pyriformi, labio externo crassissimo, antice producto.*

THE SAGRA RISSOA. Shell white, solid, high, pyramidal; whorls seven, sculptured with oblique crenated ribs ridged across; aperture pyriform, outer lip very thick, anteriorly produced.

D'ORBIGNY. Mollusques de Cuba.

Hab. Cuba.

Species 81. (Mus. Marrat.)

RISSOA LIGNEA. *Ris. (Alcinia) testâ brevi, ventricosâ, solidâ, fuscâ, acuminatâ, rubro-lineatâ; anfractibus brevibus costatis, costis rotundis, crassis, crenatis; liris spiritalibus tenuibus; aperturâ brevi, subrotundâ, columellâ crassâ, albâ; labio externo intus incrassato; costis caricosis.*

THE WOODY RISSOA. Shell short, ventricose, solid, brown, acuminate, red-lined; whorls short, ribbed, ribs rounded, thick, crenate; spiral ridges thin; aperture short, rather round, columella thick, white; outer lip thickened within, varicose without.

THORPE. Brit. Mar. Conch.

Hab. Nee.

Species 82. (Hab. Marrat.)

RISSOA CANARIENSIS. *Ris. (Alcinia) testâ minutâ, pallidâ fulcâ, brevi, crassâ, longitudinaliter crebri-costatâ, spiritaliter densè lineatâ; costis crassis, crenulatis; anfractibus paucis, brevibus, nunculatâ vel spiritaliter lineatis, medio subangulatis, ultimo ventricoso; aperturâ parvâ, rotundâ, labio externo incrassato.*

THE CANARY ISLAND RISSOA. Shell minute, pale, fulvous, short, thick, numerous longitudinally ribbed, spirally closely ridged, ribs thick, crenulate; whorls few, short, spotted or spirally lineate, rather angular in the middle, last ventricose; aperture small, rounded, outer lip thickened.

D'ORRIGNY. Watson, Proc. Zool. Soc. 1873, p. 376.

Hab. Canary Islands, Madeira.

Finer in sculpture than the other species, with crenulate ribs.

Species 83. (Mus. Marrat.)

RISSOA DEFICTA. *Ris. testâ parvâ, ventricosâ, fulcâ, tenuiter spiritaliter striatâ, semipellucidâ, obscure seriatim maculatâ; anfractibus quinque, superioribus brevissimis, ultimo rotundo, subgloboso, aperturâ rotundâ, labio externo crasso.*

THE FADED RISSOA. Shell small, ventricose, fulvous, finely spirally striated, semipellucid, obscurely spotted in rows; whorls five, upper ones very short, last rounded, rather globose; aperture rounded, outer lip thick.

MANZONI. (Watson) Proc. Zool. Soc. 1873, p. 383.

Hab. Madeira.

It seems more globose and less conical than *Rissoa semistriata* of Montagna.

Species 84. (Mus. Montrouzier.)

RISSOA ARTENSIS. *Ris. (Rissoina) testâ elongatâ, subcylindricâ, subauriculâ, tenui; anfractibus novem, apicalibus septem leviter plicatis, attenuatis, prope apicem subabruptè angustatis, penultimo subcylindrico, planato, alto; ultimo cylindrico elongato; aperturâ subtriangulâ, subcanaliculatâ; labio interno tenui, columellâ brevi, labio externo producto, incrassato.*

THE ISL. OF ART RISSOA. Shell elongated, subcylindrical, rather orange, thin; whorls nine, seven apical, slightly plaited, attenuated near the apex, rather abruptly narrowed, last but one rather cylindrical, flattened, high, last cylindrical, elongated; aperture subtriangular, with a slight canal, inner lip thin, columella short, outer lip produced, thickened.

MONTROUZIER. Journ. Conchyl. Vol. XX. p. 364, 1872.

Hab. Ile Art, New Caledonia.

Species 85. (Mus. Souverbie.)

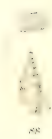
RISSOA SUBCONCINXA. *Ris. (Rissoina) testâ albâ, ovatâ, subpyramidatâ, altâ, longitudinaliter costatâ, costis tenuibus leviter arcuatis, distantibus, interstitiis brevibus; anfractibus octo, levitè crescentibus, inferioribus subcentricis; aperturâ subtriangulâ, labio interno tenui, expanso, columellâ multiplicatâ, brevi, labio externo producto, expanso, infra columellam emarginatâ.*

THE RATHER NEAT RISSOA. Shell white, ovately subpyramidal, high, longitudinally ribbed, ribs thin, slightly arched, distant, interstices smooth; whorls eight, slowly increased, lower rather ventricose; aperture subtriangular, inner lip thin, expanded, columella single plaited, short, outer lip produced, expanded, emarginated under the columella.

SOVERBIE. Journ. Conchyl. Vol. XX. p. 364, 1872.

Hab. Ile Art, New Caledonia.

This shell is named as above from its resemblance to *Rissoina concinna* of A. Adams, from which it differs materially in having no cross striae.



RISSOA.

PLATE X.

Species 86. (Mus. Crosse.)

RISSOA (HEMISTOMIA) CALEDONICA. *Ris. testâ albidâ, laevigatâ, oblongo-ovata, tenui, apice obtusa; anfractibus quinque, ultimo oblongo, aperturâ obliquâ semilunari, labio externo expanso; columellâ obliquâ, infra acuminatâ.*

THE CALEDONIAN RISSOA. Shell whitish, smooth, oblong-ovate, thin, with obtuse apex; whorls five, the last oblong, aperture obliquely semilunar, outer lip expanded; columella oblique, acuminated below.

CROSSE. Journ. Conch. Vol. XII. p. 72, 1872.

Hab. Noumea, New Caledonia.

This shell bears so strongly the aspect of a true typical *Rissoa* that, in the absence of an operculum, it seems difficult to understand why a new genus should be created for it.

Species 87. (Mus. Brit.)

RISSOA (OINA) STRICTA. *Ris. testâ solidâ, pupæformi, pallidâ fuscâ, albâ, rectâ; anfractibus octo; apicalibus attenuatis, acuminatis; medianis subinflatis, rectilateralibus superius perpendiculariter costatis, ultimo infra laevigato; aperturâ parvâ, semilunari, columellâ brevi, obliquâ, infra truncatâ, labio externo expanso, acuto.*

THE STRAIGHTENED RISSOA. Shell solid, pupa-shaped, pale fulvous, raised, straight; whorls eight; apical attenuated, acuminated, middle somewhat inflated, straight-sided, perpendicularly ribbed on the upper side, the last smooth below; aperture small, semilunar, columella short, oblique, truncated below, outer lip expanded, sharp.

MENKE. Zeitschrift für Malak. 1859.

Hab. Cape St. Lucas.

Rissoa fortis is a more broadly-ribbed, darkly-coloured shell.

Species 88. (Mus. Brit.)

RISSOA (OINA) SERIATICOSTATA. *Ris. testâ, pyramidalâ, albâ, tenui, arcuatâ, tenuiter costatâ, spiraliter striatâ, anfractibus ultimo et penultimo subinflatis,*

superioribus parvis, attenuatis, apice acuminato, aperturâ subtrigoniâ, labio externo producto, crassiusculo; columellâ superius incrassatâ, infra subtruncatâ.

THE RIB-STRIATED RISSOA. Shell pyramidal, white, thin, arched, finely ribbed, spirally striated, last and previous whorls a little inflated, upper small, attenuated, apex acuminated; aperture subtrigonal, outer lip produced, rather thick; columella thickened above, slightly truncate below.

D'ORRHOXY. Voy. Amér. Méridionale, p. 335.

Hab. St. Vincent's, West Indies.

Species 89. (Mus. Brit.)

RISSOA (OINA) CHESNELLI. *Ris. testâ albâ, subpyramidalâ, solidâ, costis solidis oblique flexuosis et striis spiralibus, elevatis, cancellatâ; spicâ acuminatâ, anfractibus apicalibus attenuatis, ultimo anfractu inflato; aperturâ parvâ, suprà infraqû subcanaliculatâ, labio externo crasso, crenulatâ.*

CHESNEL'S RISSOA. Shell white, rather pyramidal, solid, cancellated with obliquely flexuous solid ribs and spiral striae; spire acuminated, apical whorls attenuated, last whorl inflated; aperture small, slightly channelled above and below; outer lip thick, crenulated.

MICHAUD. Cat. Ris. p. 17, f. 23-24.

Hab. India.

Species 90. (Mus. Brit.)

RISSOA (OINA) BUREANA. *Ris. testâ pallidâ, solidâ, obtusè pyramidalâ, laevigatâ, tenuissimè careocostatâ; aperturâ parvâ, subtrigoniâ, columellâ crassâ, brevî, subortâ, subtruncatâ, labio externo crasso.*

THE BUREAN RISSOA. Shell pale, solid, obtusely pyramidal, smooth, very slightly bent-ribbed; aperture small, subtrigonal, columella thick, short, rather tortuous, almost truncated, outer lip thick.

SOWERBY.

R. concinna. Adams.

Hab. Isl. Burea, Philippines.

RISSOA.—PLATE X.

Species 91. (Mus. Brit.)

RISSOA (OINA) NIVEA. *Ris. testâ subpyramidalâ, costis obliquè flexuosis ornatâ; spirâ elevatâ, apice acuminatâ; ultimo anfractu infâ spiraliter costato, aperturâ infâ subquadratâ; columellâ parvâ, breviusculâ; labio externo incrassato.*

THE SNOWY RISSOA. Shell subpyramidal, ornamented with obliquely flexuous ribs; spire elevated, apex acuminate, last whorl spirally ribbed below; aperture rather square below; columella small, rather short; outer lip thickened.

ARTHUR ADAMS. Proc. Zool. Soc. 1851, p. 265.

Hab. Australia.

Species 92. (Mus. Brit.)

RISSOA (OINA) ALBIDA. *Ris. testâ pyramidalâ, acuminatâ, albâ, vel fuscâ, semipellucidâ, tenui; ultimo anfractu subinflato, levigato, alteris costatis, versus apicem attenuatis; aperturâ subtrigonâ, columellâ brevi, truncatâ, labio externo crasso.*

THE WHITISH RISSOA. Shell pyramidal, acuminate, white or buff, half-transparent, thin; last whorl a little inflated, smooth, the others ribbed, attenuated towards the apex; aperture rather trigonal, columella short, truncated, outer lip thick.

C. B. ADAMS. Shells of Jamaica.

Hab. West Indies.

Species 93. (Mus. Brit.)

RISSOA (OINA) LEVISSIMA. *Ris. testâ solidâ, breviter pyramidalâ, pallidâ fuscâ, politâ; spirâ acuminatâ, anfractibus rectilateralibus; aperturâ subtrigonâ, parvâ, columellâ crassâ, brevi, truncatâ.*

THE VERY SMOOTH RISSOA. Shell solid, shortly pyramidal, pale fulvous, polished; spire acuminate, whorls straightened; aperture rather trigonal, small, columella thick, short, truncated.

C. B. ADAMS. Shells of Jamaica.

Hab. West Indies.

Species 94. (Mus. Brit.)

RISSOA (OINA) CATESBYANA. *Ris. testâ parvâ, pyramidalâ, fuscâ, breviusculâ, costis obliquè flexuosis, validis ornatâ; spirâ brevi, anfractibus convexis; aperturâ semilunari, labio interno supernè incrassato; columellâ brevi, arcuatâ, labio externo producto, incrassato.*

CATESBY'S RISSOA. Shell small, pyramidal, brown, rather short, ornamented with obliquely flexuous strong ribs; spire short, whorls convex; aperture semilunar, inner lip thickened above; columella short, arched; outer lip produced, thickened.

D'ORIGNY. Shells of Cuba.

Rissoa scalarella. C. B. ADAMS.

Hab. Jamaica, Cuba.

Species 95. (Mus. Brit.)

RISSOA (OINA) PRINCEPS. *Ris. pyramidalâ, attenuatâ, altâ, albâ, acuminatâ; anfractibus tenuissimè costatis et striatis; ultimo elongato, infâ levigato; aperturâ subtrigoniâ, labio externo tenui.*

THE PRINCE RISSOA. Shell pyramidal, attenuated, elevated, white, acuminate; whorls finely ribbed and striated, last elongated, smooth below; aperture subtrigonal, outer lip thin.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica, West Indies.



RISSOA.

PLATE XL.

Species 96. (Mus. Brit.)

RISSOA (OINA) SULCIFERA. *Ris. testâ crassâ, pallidâ, pyramidatâ; anfractibus senis, spiraliter costatis, costis crassis, angulatis, supra suturam tribus, interstitiis serrato-fimbriatis; ultimo anfractu subcentrico; apertura pyriformi, labio externo crasso, columellâ crassâ, subplanatâ.*

THE GROOVED RISSOA. Shell thick, pale, pyramidal; whorls six, spirally ribbed, ribs thick, angular, three above the suture, interstices serrated in pits; last whorl subventricose; aperture pyriform, outer lip thick, columella thick, somewhat flattened.

TROSCHEL. — ? MS. Brit. Mus.

Hab. Coast of Belgium.

Of a pale colour, more broadly pyramidal than *Rissoia Trochlearis*.

Species 97. (Mus. Brit.)

RISSOA (OINA) FLEXUOSA. *Ris. testâ pyramidatâ, acuminatâ, medio spire subconcarâ; costis longitudinalibus, supra medium angulatis spiraliter subnodosis minutis; apertura brevi, subovatâ; labio interno superne subcalloso, columellâ acutâ; labio externo intus tumido.*

THE FLEXUOUS RISSOA. Shell pyramidal, acuminate, rather concave in the middle of the spire; provided with few longitudinal ribs, angular above the middle, slightly notched; aperture short, subovate, inner lip callous above; columella acute; outer lip tumid within.

GOULD. — ? MS. Brit. Mus.

Hab. North America.

Species 98. (Mus. Brit.)

RISSOA (OINA) VILICA. *Ris. testâ pyramidatâ, acuminatâ, albidâ; anfractibus novem, prope suturam angulatis, costis numerosis angulatis longitudinalibus minutis; ultimo infra medium spiraliter costato, costis longitudinalibus desinentibus; apertura parvâ, subpyriformi; columellâ infra rectâ.*

THE STEWARDNESS RISSOA. Shell pyramidal, acuminate, whitish; whorls nine, angular near the suture, provided with numerous angular longi-

tudinal ribs, the last spirally ribbed in the middle, the longitudinal ribs ending; aperture small, somewhat pyriform; columella straight below.

GOULD. Smithsonian Catalogue.

Hab. Loochoo.

In the middle of the last whorl the longitudinal ribs cease, and the lower part is only ribbed spirally.

Species 99. (Mus. Brit.)

RISSOA (OINA) EULIMOIDES. *Ris. testâ breviusculâ, albâ, politâ, lateraliter acuatâ, acuminatâ; anfractibus senis, ultimo rotundo; apertura obliquâ productâ, labio externo intus incrassato; columellâ latâ, crassâ, brevi.*

THE EULIMA-SHAPED RISSOA. Shell rather short, white, polished, laterally arched, acuminate; whorls six, last rounded; aperture obliquely produced, outer lip thickened within; columella broad, thick, short.

A. ADAMS. Proc. Zool. Soc. 1851, p. 279.

Hab. Isl. Capul, Philippines.

Species 100. (Mus. Brit.)

RISSOA (OINA) SEMPLICATA. *Ris. testâ parvâ, politâ, rectâ pyramidatâ, tenui, semipellucidâ, tenuissime longitudinaliter pliatâ; apertura parvâ, subpyriformi, labio externo crasso, rotundo; columellâ parvâ, acuminatâ.*

THE HALF-PLATED RISSOA. Shell small, polished, smoothly pyramidal, thin, semipellucid, very finely longitudinally plaited; aperture small, rather pyriform, outer lip thick, rounded; columella small, acuminate.

PEASE. Proc. Zool. Soc. 1862.

Hab. Pacific.

Thinner, narrower, and more transparent than *S. levisima*.

Species 101. (Mus. Brit.)

RISSOA (OINA) BROWNIANA. *Ris. testâ parvâ, pyramidatâ, acuminatâ, fuscâ, levi; anfractibus senis, altissculis, ultimo subrotundo; apertura pyriformi, labio externo obliquâ productâ.*

RISSOA.—PLATE XI.

BROWN'S RISSOA. Shell small, pyramidal, acuminate, fulvous, smooth; whorls six, rather elevated, the last somewhat round; aperture pyriform, outer lip obliquely produced.

D'ORRIGNY. Voyage dans l'Amérique Méridionale.
Hab. St. Vincent's.

Species 102. (Mus. Brit.)

RISSOA (OINA) TRITICEA. *Ris. testâ brevi, crassâ, albâ, pupiformi; anfractibus brevibus, costatis; costis arcuatis, levibus, rotundis, infra medium anfractus ultimi desinentibus; ultimo anfractu brevi; aperturâ parvâ, subauriformi, anticè rotundatâ; labio crasso, rotundo; columellâ brevi, continuo.*

THE WHEAT RISSOA. Shell short, thick, white, pupa-shaped; whorls short, ribbed, ribs curved, smooth, round, ending below the middle of the last whorl, last whorl short; aperture small, rather auriform, anteriorly rounded, lip thick, rounded, columella short, continuous.

PEASE. Proc. Zool. Soc. 1800, p. 438.

Hab. Pacific Ocean.

Species 103. (Mus. Brit.)

RISSOA (OINA) PHILIPPINI. *Ris. testâ turrîtâ, pallidè fideâ, longitudinaliter crebrè costatâ, interstitiis cancellatis; anfractibus senis, rectis ad suturam angulatis; ultimo anfractu infâ spiraliter costatâ, aperturâ parvâ, subovatâ, columellâ latâ, subarcuatâ.*

PHILIPPI RISSOA. Shell turreted, pale fulvous, longitudinally closely ribbed, interstices cancelled; whorls six, straight, with an angle at the suture, last whorl spirally grooved on the under side; aperture small, subovate; columella broad, a little curved.

PFEIFFER. —? MS. Brit. Mus.

Rissoa cancellata. Philippi.

Hab. Cuba, Jamaica.

Species 104. (Mus. Brit.)

RISSOA (OINA) WOODWARDI. *Ris. testâ minutâ, breviter pyramidatâ, pallidissimè fideâ; anfractibus senis, brevibus, longitudinaliter costatis; costis obliquè arcuatis, levibus, rotundis; ultimo anfractu infâ uncostato; aperturâ parvâ, pyriformi; labio externo crasso, anfractu apicatis rotundo.*

WOODWARD'S RISSOA. Shell minute, shortly pyramidal, very pale fulvous; whorls six, short, longitudinally ribbed, ribs obliquely arched, smooth, rounded, last whorl single-ribbed below; aperture small, pyriform; outer lip thick, apical whorl rounded.

CARPENTER. Shells of Mazatlan, p. 357.

Rissoa clandestina. C. B. Adams.

Rissoa firmata. C. B. Adams.

Hab. Mazatlan.

Species 105. (Mus. Brit.)

RISSOA (OINA) TROCHLEARIS. *Ris. testâ breviusculâ, crassâ, rubro fuscâ, spiraliter costis angulatis cinctâ; anfractibus senis, brevibus, medianis paulo inflatis; aperturâ albâ, subovatâ; columellâ crassâ, brevi; canali conspicuo, labio externo intus incrassato, extâs crenato.*

THE COIL RISSOA. Shell rather short, thick, red-brown, spirally belted with angular ribs; whorls six, short, middle ones a little inflated; aperture white, subovate; columella thick, short; canal conspicuous, outer lip thickened within, crenated without.

CARPENTER. MS. Smithsonian Inst. and B. M.

Rissoa sulcifera var. Gould.

Rissoa ligata. Gould.

Rissoa annulata. Dunbar.

Hab. —?



RISSOA.

PLATE XII.

Species 106. (Mus. Watson.)

RISSOA AUREANTIACA. *Ris. testâ pallidâ aurantiâ, altâ, spirâ subpunctatâ; anfractibus quinâ, concentricis, allis, spirâliter tenuiter costatis, superne costis obliquis, subtilissimis, longitudinalibus, sculptis, ultimo anfractu infusâ spirâliter conspicuâ bicostato; aperturâ oratâ, labio lato, margine interno anticâ acutè producto.*

THE ORANGE RISSOA. Shell pale orange, raised, spire a little in steps; whorls five, rather convex, spirally finely ribbed, sculptured above with oblique, rather distant longitudinal ribs, last whorl with two spiral ribs below; aperture ovate, lip broad, inner margin anteriorly sharply produced.

WATSON. Proc. Zool. Soc. 1873, p. 367, Pl. XXXIV. f. 3.

Hab. Madeira.

Species 107. (Mus. Watson.)

RISSOA CRISPA. *Ris. testâ parvâ, albâ, undulatim spirâliter costatâ, gradatâ, costis crassis longitudinalibus flexuosis ornatâ; apice obtuso; anfractibus quaternis, supra medium angulatis, ultimo infusâ spirâliter bicostato, umbilicato; aperturâ subtriangulâ, labio crasso, cæcis crenato, supra infusâ angulato.*

THE CRISP RISSOA. Shell small, whitish, spirally ribbed in waves, ornamented with thick longitudinal flexuous ribs; apex obtuse; whorls four, angular above the middle, last with two spiral ribs below, umbilicated; aperture subtriangular, lip thick, crenated outside, angular above and below.

WATSON. Proc. Zool. Soc. 1873, p. 369, Pl. XXXIV. f. 6.

Hab. Madeira.

Species 108. (Mus. Marrat.)

RISSOA MACANDREW. *Ris. testâ parvâ, brevî, rubrofusâ; anfractibus quinque, gradatis, angulatis, spirâliter crebrè costatis, costis perpendicularibus, crassis, supra medium angulatis munitis, ultimo*

infusâ spirâliter uncostato; aperturâ obliquè sub-oratâ; costâ labiali crassâ, rotundâ, spirâliter lirata.

MACANDREW'S RISSOA. Shell small, short, reddish-brown; whorls five, in steps, angular, spirally closely ribbed, strengthened with perpendicular thick ribs, with an angle above the middle, last with a single spiral rib below; aperture obliquely subovate, labial rib thick, rounded, spirally ridged.

WATSON. Proc. Zool. Soc. 1873, p. 372, Pl. XXXIV. f. 8.

Hab. Gorgulho, Madeira.

Species 109. (Mus. Watson.)

RISSOA MONIZIANA. *Ris. testâ brevissimâ, ferè albi, spirâliter lirata, liris rotundis, approximatis; apice acuto; anfractibus quaternis, brevibus, supra medium angulatis; aperturâ magnâ, rotundâ, costâ labiali subexpansâ, crassâ.*

MONIZ'S RISSOA. Shell rather short, almost white, spirally ridged, ridges rounded, close; apex acute; whorls four, short, angular above the middle; aperture large, rounded, labial rib rather expanded, thick.

WATSON. Proc. Zool. Soc. 1873, p. 369, Pl. XXXIV. f. 6.

Hab. Madeira.

Species 110. (Mus. Watson.)

RISSOA PICTA. *Ris. testâ parvâ, trochiformi, distanter spirâliter striatâ, maculis fuscis quadratis in series tres dispositis ornatâ; anfractibus quinque, convexis, ultimo magno; aperturâ subtriangulâ, labio crasso; columellâ crassâ, arcuatâ.*

THE PAINTED RISSOA. Shell small, top-shaped, distantly spirally striated, ornamented with brown square spots arranged in three rows; whorls five, convex, last large; aperture subtriangular, lip thick; columella thick, arched.

JEFFREYS. Brit. Moll.

Hab. Madeira.

A narrower shell than *Rissoa depicta*, the whorls being more elongated and distinct.

Species 111. (Mus. Watson.)

RISSOA NOVARENSIS. *Ris. testâ parvâ, breviter ovato-conicâ, crassâ, pallidissimâ fuleâ, costis longitudinalibus frequentibus liris paucis arcuatis, infra medium desinentibus, et liris spiralibus tenuibus sculptâ, inter costas biserialitè fusco-maculatis, infra maculas spiralliter tricotatis; anfractibus quaternis, brevibus, apicali rotundo, ultimo magno; aperturâ subrotundâ, labio crasso, rotundo.*

THE NOVARA RISSOA. Shell small, shortly ovate-conical, thick, very pale fulvous, sculptured with numerous ridged ribs a little curved, ending below the middle and slender spiral ridges, spotted with brown in two rows, three spiral ribs below the spots; whorls four, short, apical rounded, last large; aperture rather round, lip thick, rounded.

WATSON. Proc. Zool. Soc. 1873, p. 377, Pl. XXXV. f. 13.

Hab. Madeira.

Named after a frigate with which the shell had nothing to do.

Species 112. (Mus. Watson.)

RISSOA WATSONI. *Ris. testâ parvâ, tenuissculâ, trochiformi, liris spiralibus prominentibus rotundis cinctâ; anfractibus quaternis, apicali semitondo, duobus medianis angulatis rugoso-costatis, inter costas castaneo maculatis, ultimo magno, angulato, supra angulum planulato, longitudinaliter costato, inter costas rubro-maculato, medio et infri spiralliter solim costato, costâ labiali haud marginem attingenti.*

WATSON'S RISSOA. Shell small, rather thin, trochus-shaped, girt with spiral prominent ridges; whorls four, apical semitrochus, two middle angular, roughly ribbed, last large, angular, flattened, and longitudinally ribbed and spotted with red between the ribs above the angle, only spirally ribbed in the middle and below; labial rib not reaching the margin.

SCHWARTZ. Proc. Zool. Soc. 1873, Pl. XXXV. f. 11.

Hab. Madeira.

Species 113. (Mus. Watson.)

RISSOA PERMINIMA. *Ris. testâ parvâ, oblongâ, albâ, opacâ, levigatâ, anfractibus quaternis, subelevatis, lateraliter rotundatis, ultimo magno, angustè umbilicatis; aperturâ subovatâ, margine ferè integri, tenuissculo.*

THE VERY SMALL RISSOA. Shell small, oblong, white, opaque, smooth; whorls four, rather raised, laterally rounded, last large, narrowly umbilicated; aperture rather oval, margin nearly entire, rather thin.

MANZONI. Proc. Zool. Soc. 1873, p. 385.

Rissoa abjecta. Watson.

Hab. Madeira.

Species 114. (Mus. Watson.)

RISSOA ALBUGO. *Ris. testâ parvâ, tenui, semipellucidâ, subovato-trochiformi, fasciis lineisque puncturâ rubrorum pictâ; anfractibus quinis, brevibus, convexis; aperturâ magnâ, anticè rotundâ, posticè acuminatâ, columellâ altâ, subarcuatâ.*

THE PEARLY FILM RISSOA. Shell small, thin, semipellucid, subovate-trochiform, painted with bands and lines of red spots; whorls five, short, convex; aperture large, anteriorly rounded, posteriorly acuminated, columella high, rather arched.

WATSON. Proc. Zool. Soc. 1873, p. 379.

Hab. Madeira.

The colouring consists in spiral and perpendicular rows of minute red spots.

Species 115. (Mus. Watson.)

RISSOA GIMBERULA. *Ris. testâ brevi, quadrangulâ, solidâ, albâ, vel pallidè fuleâ, spiralliter angustè trifasciatâ, costis magnis obliquè flexuosis, distantibus, ad suturam acuminatis minutâ, spirâ gradatâ, suturâ concavâ; anfractibus brevissimis, ultimo infri costâ spirali validâ desinenti, latè umbilicâ; aperturâ parvâ, perpendiculariter ovatâ, margine tenui, anticè prominenti, costâ labiali latissimâ, crassâ.*

THE LITTLE HUMPED RISSOA. Shell short, quadrangular, solid, white or pale fulvous, with three spiral narrow bands, strengthened with large obliquely flexuous distant ribs, pointed at the suture, spire gradated, suture concave; whorls very short, the last ending below in a solid spiral rib, broadly umbilicated; aperture small, perpendicularly oval, margin thin, prominent in front, labial rib very broad, thick.

WATSON. Proc. Zool. Soc. 1876, p. 371, Pl. XXXIV. f. 7.

Hab. Madeira.

This beautiful little shell has the general appearance of a *Cancellaria*, but is a true *Rissoa*.



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As. 1



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RISSOA.

PLATE XIII.

Species 116. (Mus. Watson.)

RISSOA CORIACEA. *Ris. testâ parvâ, albâ, tenui, liris longitudinalibus tenuibus numerosis, eleganter flexuosis, et striis tenuissimis spiralibus sculptâ; anfractibus quinis, apicali semicirculari, medianis convexis, ultimo magno, subovali; aperturâ subovatâ, anticâ rotundâ, posticâ acuminatâ, labio integro, tenui.*

THE CORIACEO'S RISSOA. Shell small, white, thin, sculptured with longitudinal, thin, numerous ridges, elegantly flexuous and very fine spiral striae; whorls five, apical half-round, middle convex, last large, subovate; aperture subovate, rounded anteriorly, acuminate posteriorly, lip entire, thin.

MANZONI. Proc. Zool. Soc. 1873, p. 389, Pl. XXXVI. f. 27.

Hab. Santa Cruz, Madeira.

A light inflated white shell, beautifully sculptured.

Species 117. (Mus. —?)

RISSOA (JEFFREYSIA) OPALINA. *Ris. testâ subglobosâ, fusco-cornuâ, diaphanâ, nitentâ; anfractibus quaternis, apicali semicirculari, duobus medianis brevibus, convexissimis, ultimo magno, inflato; aperturâ subrotundâ, margine integro.*

THE OPALINE RISSOA. Shell subglobose, horny-brown, diaphanous, shining; whorls four, apical half-round, two middle short, very convex, last large, inflated; aperture rather rounded, margin entire.

JEFFREYS. Brit. Moll.

Hab. Channel Islands (littoral.)

Species 118. (Mus. Brit.)

RISSOA (JEFFREYSIA) DIAPHANA. *Ris. testâ parvâ, nitentâ, fusco-cornuâ, diaphanâ, subconicâ; spirâ elevatâ, conicâ, obtusâ; anfractibus quinis, gradatim crescentibus, convexis, ultimo subinflato; aperturâ subrotundâ, margine fere continuo.*

THE TRANSPARENT RISSOA. Shell small, shining, horny-brown, transparent, rather conical; spire elevated, conical, obtuse; whorls five, gradually

increased, convex, last rather inflated; aperture rather round, margin nearly continuous.

ALPER. —? Forbes and Hanley, Brit. Moll.

Hab. Great Britain. Rare, littoral.

Species 119. (Mus. Brit.)

RISSOA (OINA) FASCIATA. *Ris. testâ albâ, acuminatâ, pallidâ fulvâ, castaneo-bifasciatâ, flexuosis crebri-costatâ; anfractibus septem, declivibus; aperturâ subtrigoniâ, canali conspicuâ, labio externo crasso, rotundo; columelli brevi, crassi.*

THE Banded RISSOA. Shell raised, acuminated, pale fulvous, with two chestnut bands, with numerous flexuous ribs; whorls seven, sloped; aperture subtrigonal, canal conspicuous, outer lip thick, rounded; columella short, thick.

ANGAS. Proc. Zool. Soc. 1851, p. 264.

Hab. New Zealand.

Species 120. (Mus. —?)

RISSOA CASTANEA. *Ris. testâ elevatâ, levigatâ, fuscâ, apice obtusâ; anfractibus quinis, convexiusculis, gradatim crescentibus, elevatis, ultimo majusculo; aperturâ subpyriformi, margine crassiusculo.*

THE CHESTNUT RISSOA. Shell raised, smooth, brown; apex obtuse; whorls five, rather convex, gradually increasing, raised, last rather large; aperture rather pyriform, margin rather thick.

JEFFREYS. —? Brit. Moll.

Hab. British Islands.

Species 121. (Mus. Brit.)

RISSOA (OINA) COSTULATA. *Ris. testâ parvâ, pupiformi, solidâ, longitudinaliter costatâ, albâ, supra medium anfractum castaneo interruptim fasciatâ; anfractibus octavis, apicalibus attenuatis, medianis subinflatis; aperturâ parvâ, margine tenui.*

THE SMALL RIBBED RISSOA. Shell small, pupa-shaped, solid, longitudinally ribbed, white, interruptedly chestnut-banded above the middle of the whorls

whorls eight; apical attenuated, middle a little swelled; aperture small, margin thin.

PEASE. — ? MS. Brit. Mus.

Hab. Sandwich Islands.

Species 122. (Mus. — ? Copied.)

RISSOA (JEFFREYSIA) GULSONE. *Ris. testâ parvâ, fulvescenti, lævigatâ, elevatâ, spirâ obtusâ; anfractibus quinis, convexis, gradatim crescentibus, ultimo angustissimo, angustissime umbilicato; aperturâ subrotundâ, anticâ productâ.*

WILSON'S RISSOA. Shell small, slightly fulvous, smooth, raised, spire obtuse; whorls five, convex, gradually increasing, last rather narrow, very narrowly umbilicated; aperture rather rounded, anteriorly produced.

CLARK. — ? British Mollusca.

Hab. Sandwith, Weymouth, Guernsey.

Species 123. (Mus. Brit.)

RISSOA (OINA) AUSTRALIS. *Ris. testâ minutâ, albâ, costis nodosis, distantibus, longitudinalibus et liris paucis spiralibus profundè cancellatâ; anfractibus quinis, biangulatis; aperturâ subtriangulâ, canali conspicuo; columellâ crassâ, labio externo crasso, margine interno crenulatâ.*

THE AUSTRALIAN RISSOA. Shell very small, white, cancellated deeply with nodulous, distant, longitudinal ribs and few spiral ridges; whorls five, biangular; aperture subtriangular, canal conspicuous; columella thick, outer lip thick, inner margin crenulated.

SOWERBY.

Hab. Australia.

A deeply cancellated little species, not exactly resembling any yet described.

(ASSIMINEA)

Species 1. (Mus. Sowerby.)

ASSIMINEA GRAYANA. *Ass. testâ conicâ, lævigatâ, epidermide subviridi indutâ; spirâ acuminatâ; anfractibus quinis, declivibus, rectilateralibus; aperturâ magnâ, subtriangulâ, intus castaneâ, margine continuo.*

GRAY'S ASSIMINEA. Shell conical, smooth, covered with greenish epidermis; spire acuminate; whorls five, sloped, straight-sided; aperture large, rather trigonal, chestnut within, margin continuous.

JEFFREYS. Trans. Linn. Soc.

Hab. Marshes of Kent.

Species 2. (Mus. Sowerby.)

ASSIMINEA LITTOREA. *Ass. testâ globosâ, subdiaphanâ, lævigatâ, fulvâ; anfractibus tribus, superioribus brevissimis, ultimo magno, inflato, angustè umbilicato; aperturâ latâ, margine tenui.*

THE SHORE ASSIMINEA. Shell globose, a little transparent, smooth, fulvous; whorls three, upper very short, last large, inflated, narrowly umbilicated; aperture broad, margin thin.

DELE CHAULE. — ?

Hab. Shores at Weymouth, &c.

RISSEO.

	Plate.	Species		Plate.	Species
<i>abyecta</i> , Watson.....	XII.	113	<i>Corilea</i> , D'Orbigny ..	III.	24
<i>abyssinola</i> , D'Orbigny.....	III.	23	<i>costata</i> , Adams.....	III.	20
<i>acicula</i> , Risso.....	II.	11	<i>costulata</i> , Alder.....	III.	20
<i>acuta</i> , Desmarest.....	II.	11	<i>costulata</i> (Rissoina), Pease.....	XIII.	121
<i>acuta</i> , Desparmand.....	V.	41	<i>crenata</i> , <i>Jefferys</i>	VIII.	70
<i>albida</i> C. B. Adams.....	X.	22	<i>crassilabrum</i> , Pease.....	VII.	59
<i>albigo</i> , Watson.....	XII.	114	<i>crebrilenticata</i> , Sowerby.....	VI.	56
Alderi, <i>Jefferys</i>	VI.	49	<i>crenolata</i> , Michaud.....	IV.	32
<i>anatina</i> , Desparmand.....	VI.	41	<i>crispa</i> , Watson.....	XII.	107
<i>annulata</i> , Dunker.....	XI.	105	<i>crystallina</i> , Brown.....	II.	19
<i>approximata</i> , Brown.....	IV.	35	<i>Cumingii</i> , Reece.....	I.	4
<i>Artensis</i> , Montreuil.....	IX.	84	<i>cyglostoma</i> , Recluz.....	III.	26
<i>aurantica</i> , Watson.....	XII.	106	<i>decurcata</i> , Montagu.....	IX.	78
<i>aureiscapulum</i> , <i>Linnaeus</i>	II.	11	<i>deformis</i> , Sowerby.....	VII.	63
<i>australis</i> , Sowerby.....	XIII.	123	<i>denticulata</i> , Risso.....	IV.	1*
Barleii (Odost.), Clarke.....	VI.	52	<i>depicta</i> , Montagu.....	IX.	80
Barleii, <i>Jefferys</i>	III.	27	<i>Deshayesiana</i> , Recluz.....	VII.	62
Beauvi, <i>Hanley</i>	IV.	37	<i>diaphana</i> , Alder.....	XIII.	118
Browniana, D'Orbigny.....	XI.	101	D'Orbignyana, A. Adams.....	I.	7
Bruguierei, Payraudeau.....	I.	5	<i>Enlimoides</i>	XI.	99
Bryereri, Montagu.....	I.	8	<i>Enopaea</i> , Risso.....	I.	2
Bureana, Sowerby.....	X.	20	<i>exigua</i> , Michaud.....	III.	29
<i>caelata</i> , A. Adams.....	II.	14	<i>eximia</i> , <i>Jefferys</i>	VI.	52
<i>calathisea</i> , Montagu.....	I. V.	19	<i>fasciata</i> , Angus.....	XIII.	119
<i>calathus</i> , Forbes, <i>Hanley</i>	V.	39	<i>fimbriata</i> , Sowerby.....	V.	45
Caledonica, Crosse.....	X.	86	<i>firmata</i> , C. B. Adams.....	XI.	104
<i>canaliculata</i> , Schwartz.....	VII.	50	<i>flexuosa</i> , Gould.....	XI.	97
Canariensis, D'Orbigny.....	IX.	82	<i>fortis</i> , C. B. Adams.....	IV.	30
<i>cancellata</i> , Recluz.....	III.	22	<i>Freemantilla</i> , Risso.....	I.	2
<i>cancellata</i> , Costa.....	IV.	32	<i>fulgida</i> , Adams.....	VI.	50
<i>carinata</i> , Costa.....	II.	16	<i>fulva</i> , Michaud.....	VI.	55
<i>castanea</i> , <i>Jefferys</i>	XIII.	120	<i>gentilissiana</i> , Crosse.....	V.	44
Catesbyana, D'Orbigny.....	X.	24	<i>gibberula</i> , Watson.....	XII.	115
Chesnellii, Michaud.....	X.	89	<i>glabrata</i> , Megherle.....	II.	19
<i>cinez</i> , Donovan.....	IV.	32	<i>gracilis</i> , Macgillivray.....	V.	40
<i>cinez</i> , Linnaeus.....	I.	2	<i>gracilata</i> , Philippi.....	I.	2
<i>cimicoides</i> , Forbes.....	III.	25	Grayana, <i>Jefferys</i> (Assina).....	XIII.	1
<i>cinet</i> , A. Adams.....	VIII.	71	Gulsonae, Clarke.....	XIII.	122
<i>cingillus</i> , Montagu.....	II.	15	<i>Guerinii</i> (—?).....	III.	29
<i>clandestina</i> , C. B. Adams.....	XI.	104	<i>hyalina</i> , Desmoulins.....	IV.	33
<i>clathrata</i> , A. Adams.....	IX.	76	<i>incerta</i> , Sowerby.....	V.	45
<i>communis</i> , Forbes.....	V.	40	<i>inconspicua</i> , Alder.....	IV.	34
<i>concinna</i> , A. Adams.....	I.	9	<i>insignis</i> , Ad. & Reece.....	VII.	61
<i>coreacea</i> , <i>Mazzoni</i>	XIII.	116	<i>insolita</i> , Deshayes.....	V.	43

* Erroneously referred to Plate I. fig. 1.

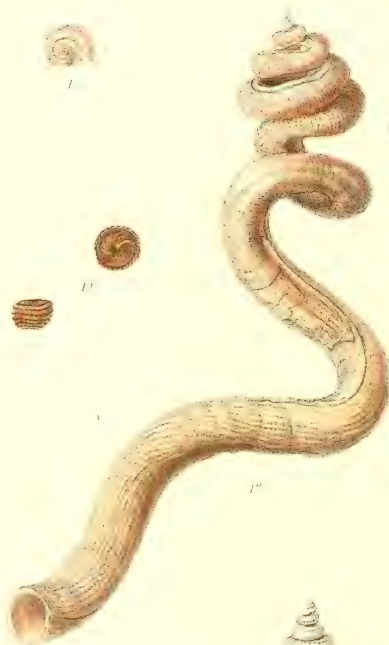
RISSOA.

	Plate.	Species.		Plate.	Species.
<i>interrupta</i> , Johnson.....	IV.	36	<i>scalariana</i> , A. Adams.....	I.	6
<i>labiosa</i> , Montagu.....	II.	12	<i>scalaroides</i> , Adams.....	I.	1
<i>laetca</i> , Desm. abies.....	III.	22	<i>semiglabrata</i> , A. Adams.....	VII.	58
<i>ligata</i> , Gould.....	XI.	105	<i>semistriata</i> , Montagu.....	III.	28
<i>lignea</i> , Thorpe.....	IX.	81	<i>semiplicata</i> , Pease.....	XI.	160
<i>lilacina</i> , Recluz.....	IV.	33	<i>similis</i> , Scacchi.....	III.	29
<i>littorea</i> , Delle Chiaje (Assim).....	XIII.	2	<i>Smithii</i> , Angus.....	VIII.	58
<i>levissima</i>	X.	93	<i>soluta</i> , Philippi.....	VI.	48
<i>levissima</i> , C. B. Adams.....	X.	93	<i>spirata</i> , Sowerby.....	II.	17
<i>Macandrewi</i> , Watson.....	XII.	108	<i>splendida</i> , Eichw.....	IX.	79
<i>maculata</i> , Sowerby.....	IV.	31	<i>striata</i> , Gray.....	II.	14
<i>mammillata</i> , Risso.....	I.	2	<i>striata</i> , Montagu.....	V.	40
<i>marginatus</i> , Montagu.....	II.	11	<i>striaticostata</i> , D'Orbigny.....	X.	88
<i>membranacea</i> , Loebn.....	VIII.	67	<i>striatula</i> , Montagu.....	II.	16
<i>minutissima</i> , Michand.....	V.	40	<i>striata</i> , Menke.....	X.	87
<i>Mohrensterni</i> , Deshayes.....	VII.	57	<i>striolata</i> , A. Adams.....	VII.	65
<i>Moniziana</i> , Watson.....	XII.	109	<i>subconcinna</i> , Sowerby.....	IX.	85
<i>monilis</i> , Fleming.....	II.	16	<i>sublata</i> , Adams.....	IV.	36
<i>monodonta</i> , Beauv.....	VIII.	73	<i>subsulcata</i> , Philippi.....	III.	28
<i>Montagui</i> , Payraudeau.....	I.	3	<i>subumbilicata</i> , Berkely.....	III.	27
<i>nitida</i> , A. Adams.....	VI.	53	<i>sulcifera</i> , Troschel.....	XI.	96
<i>nivea</i> , A. Adams.....	X.	91	<i>supracostata</i> —.....	IV.	38
<i>nodicincta</i> , A. Adams.....	VIII.	72	<i>tristriata</i> , Thomson.....	III.	28
<i>Novarensis</i> , Watson.....	XII.	111	<i>triticea</i> , Pease.....	XI.	162
<i>opalina</i> , Jeffreys.....	XIII.	117	<i>trochlearis</i> , Carpenter.....	XI.	105
<i>parva</i> , Costa.....	IV.	35	<i>turricula</i> , Angus.....	VIII.	69
<i>perminuta</i> , Manzoni.....	XII.	113	<i>ulva</i> , Pennant.....	III.	27
<i>Philippiana</i> , Pfeiffer.....	XI.	104	<i>unifasciata</i> , Montagu.....	VI.	54
<i>picta</i> , Jeffreys.....	XII.	110	<i>variabilis</i> , Mühlfeldt.....	IX.	77
<i>plicata</i> , Mühlfeldt.....	III.	29	<i>variegata</i> , Angus.....	VII.	64
<i>princeps</i> , C. B. Adams.....	X.	95	<i>ventricosa</i> , Desmoulins.....	III.	21
<i>proxima</i> , Alder.....	II.	18	<i>ventricosa</i> , Dillwyn.....	V.	41
<i>pulcherrima</i> , Jeffreys.....	V.	47	<i>ventrosa</i> , Montagu.....	V.	41
<i>pulex</i> , Johnson.....	III.	28	<i>venusta</i> , Philippi.....	II.	13
<i>punctura</i> , Montagu.....	IV.	35	<i>villica</i> , Gould.....	XI.	98
<i>puncturata</i> , Macgillivray.....	IV.	35	<i>violacea</i> , Desmarest.....	VIII.	71
<i>pyramidalis</i> , A. Adams.....	VIII.	66	<i>virginea</i> , Brown.....	II.	18
<i>reticulata</i> , Sowerby.....	VIII.	75	<i>vitrea</i> , Montagu.....	II.	19
<i>rosea</i> , Deshayes.....	V.	42	<i>Watsoni</i> , Donovan.....	II.	15
<i>rubra</i> , Adams.....	VI.	54	<i>Watsoni</i> , Sowerby.....	XII.	112
<i>rufilabris</i>	IV.	33	<i>Woodwardi</i> , Carpenter.....	XI.	104
<i>sagittata</i> , Forbes.....	II.	15	<i>Zetlandica</i> , Montagu.....	III.	26
<i>Sagraiana</i> , D'Orbigny.....	IX.	89			

MONOGRAPH
OF THE GENUS
SILIQUARIA.

"Holy, holy, holy! Lord God Almighty!

All Thy works shall praise Thy Name, in earth, and sky, and sea."—*Bishop Heber.*



SILIQUARIA.

PLATE I.

Genus SILIQUARIA. Bruguière.

Testa marina, tubuliformis, spiritaliter incisio-fissurata, versus apicem plerumque laxè spiralis, deinde irregulariter contracta; operculum corneum, cylindricum, multilaminatum.

Shell marine, tubuliform, with a spirally-incised fissure, generally loosely spiral towards the apex, afterwards irregularly twisted; operculum horny, cylindrical, consisting of numerous laminae.

Synonym. TENAGODES. Guettard.

It is not within the scope of this work to enter critically into questions of generic nomenclature. If it were, we should still be disinclined to change the generally adopted and almost universally recognised name given above. The animal was formerly supposed to be an annelid, but is now ascertained to be a mollusk, with a remarkably complicated operculum, not unlike that of a solarium. The examination we have made gives us nearly a dozen fairly distinct species, with one or two of more doubtful character. The siliquariae are widely spread, the typical species being found frequently in groups embedded in sponges and entangled in the closely-twined roots of fuci. The Australian one or two species are like ponderons and coarse imitations of the Mediterranean *S. anguina*, excepting in the character of the slit. There do not appear to be any northern species of this interesting genus. M. Otto Mörch, in his revision of the *Tenagodi* in the Zoological Proceedings, arranges the species into subgenera, and even into genera, by the characters of the slit. This, however, is so subject to variation in the same species, and even in the same individuals, that it is scarcely reliable even for specific, much less for generic, distinction.

Species 1. (Fig. a, b, c, d, Mus. Brit. Sowb.)

SILIQUARIA OBUSA. *Sil. testâ elongatâ, angustibus magnis, utrinque spiritaliter subaequalibus, intus levissimè, extus incrassatis, concentricè fissuratis,*

aperturâ rotundâ; fissurâ spirali simplici, versus apicem frequenter clausâ.

THE OBTUSE SILIQUARIA. Shell elongated, whorls large, spirally, rather finely lirate, rather smoother within, thickened on the outside, concentrically fissured; spiral fissure simple, frequently closed towards the apex.

SCHUMACHER.

Hab. Mediterranean.

Serpula anguina, as of Linn. Lam. Phil. &c.

Serpula annularis, Dillwyn.

Serpula angustus, Montfort.

Helix incisus, Linn. test. jun.

This species being generally known by the name *Siliquaria anguina*, I should much have preferred retaining that name for it. But it appears perfectly clear that Born was wrong in taking what Linnaeus erroneously introduced as a variety for the type of his species, which is the true *Serpula anguina* Linnaeus, *S. muricata* Born. The name *S. obtusa* is founded upon what is a common variation in several species, namely, that of almost commencing with several broad, closely coiled whorls, so as to form a cylinder. *S. anguina* of Linnaeus is carefully described as having the slit subarticulated, whereas that of the present species is quite simple.

Species 2. (Fig. a, b, Mus. Brit.)

SILIQUARIA CUMINGII. *Sil. testâ elongatâ, albâ, angustè convolatâ, tenuissimè spiritaliter striatâ, extus infra tenuiter concentricè incisâ; fissurâ spirali articulatâ.*

CUMING'S SILIQUARIA. Shell elongated, white, narrowly convolute, very finely spirally striated, finely concentrically incised on the lower part outside; spiral fissure articulated.

MÖRCH. Proc. Zool. Soc. 1860.

Hab. Isl. Ticao, Philippines; var. b. Japan.

Fig. b is a somewhat broader variety of this finely sculptured shell. The slit is articulated so as to present a chain-like appearance.



SILIQARIA.

PLATE II.

Species 3. (Mus. Brit.)

SILIQARIA PONDEROSA. *Sil. testâ griseo-fuscescenti crassissimo, magno; anfractibus magnis, prope apicem et infra latè convolutis et approximatis, supra fissuram undulato-dentatis, intus laevissimis, extus incrassatis, rudè concentricè fissuratis, ultimo laxato; fissurâ spirali in anfractibus superioribus clausâ, tùm denticulatâ vel articulatâ, deindè simplicî.*

THE PONDEROUS SILIQARIA. Shell brownish grey, very thick, large; whorls large, broadly convoluted and approximate near the apex and below; wavyly dentated above the fissure, rather smooth inside, thickened outside, roughly concentrically fissured; last loose; spiral fissure closed in the upper whorls, then denticulated or articulated, afterwards simple.

MÖREN. (Tenagodus) Proc. Zool. Soc. 1860.

Hab. Port Essington.

We admit this species on account of the apparent distinctness of form, which may nevertheless be only analogous to the turbinated variety of *Siliquaria anguina*.

Species 4. (Mus. Brit.)

SILIQARIA TROCHLEARIS. *Sil. testâ albidâ, rugosâ, prope apicem et versus medium densè convolutâ; tubâ magnitudinè mediocrî; anfractibus subrugatis, concentricè rudè fissuratis; fissurâ spirali rotundè et conspicuè articulatâ.*

THE RULY SILIQARIA. Shell whitish, rugose, closely convoluted near the apex and towards the middle; tube moderate in size; whorls rather rough, concentrically rudely fissured; spiral fissure roundly and conspicuously articulated.

MÖREN. (Tenagoda) Proc. Zool. Soc. 1860, p. 498.

Hab. Philippines.

The coiled portion of this species is close and compact, and the regular rounded articulations give a chain-like appearance to the fissure.

Species 5. (Fig. a. b, Mus. Brit.)

SILIQARIA LACTEA. *Sil. testâ parvâ, candidâ, celâ fuscâ et violaceâ, plerumque irregulariter contortâ; tubâ parvâ, subrugosâ, rarè striatâ; anfractibus apicalibus spiritaliter pyramidalis; alteris subæqualibus; fissurâ articulatâ, prope apicem per laminam partim clausâ.*

THE MILKY SILIQARIA. Shell small, white, or brown and violet, generally irregularly contorted; tube small, rather rough, rarely striated; apical whorls spirally pyramidal; others nearly equal; fissure articulated, partly closed near the apex by a lamina.

LAMARCK. Hist. Nat. Anim. s. Vert. V. p. 338.

Hab. Port Essington.

This little siliquaria is very gregarious, forming conglomerated masses. Fig. b represents a small portion of one of these masses.

Species 6. (Mus. Brit.)

SILIQARIA AUSTRALIS. *Sil. testâ magnâ, crassâ, versus apicem pyramidalâ, deindè laxatâ; tubâ magnâ, regulariter crescenti, intus tenuissimè striatâ, extus crassâ, rugosâ, concentricè fissurâtâ; fissurâ spirali rotundè articulatâ, prope aperturam hiantî; marginibus crassis.*

THE AUSTRALIAN SILIQARIA. Shell large, thick, pyramidal towards the apex, then loosened; tube large, regularly increased, very finely striated on the inner side, thick, rugose on the outer, concentrically fissured; spiral fissure roundly articulated, gaping near the aperture; margin thick.

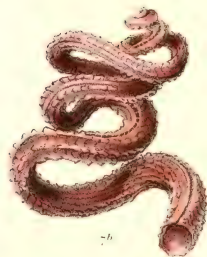
QUOY et GAIMARD. Voyage de l'Astrolabe.

Hab. Australia.

Although thicker and coarser in texture than the typical species, this species resembles it so much that it would be difficult to distinguish the two were it not for the round chain-like articulations of the spiral fissure. That of *S. obtusa* is quite simple.



7a



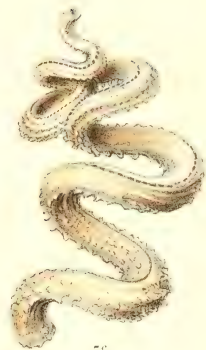
7b



7c



7d



7e

SILIQARIA.

PLATE III.

Species 7. (Fig. *a, b, c, d, e*, Mus. Brit. Sowb.)

SILIQARIA ANGUINA. *Sil. testâ plerumque crassâ, latè irregulariter contortâ, distanter spirâliter liratâ, liris acutè squamatis vel echinatis; tubâ plerumque latè crescenti; fissurâ spirâli angustissimâ in partibus oblongo-articulatâ.*

THE SNAKE SILIQARIA. Shell generally thick, broadly and irregularly twisted, distantly spirally ridged; ridges sharply squamose or spined; tube generally very slowly increasing; spiral fissure very narrow, with oblong articulations in parts.

LINNEÆUS. Syst. Nat. p. 1267.

Serpula muricata, Born.

Tenagoda anguina, Mörch.

Siliquaria polygona, Blainville.

Siliquaria ruber, Schumacher.

Siliquaria papillosa (?) Rees.

Siliquaria laevigata, Lamarek.

Siliquaria sulcata, Gray.

Serpula echinata, Gmel.

Hob. Moluccas, Ceylon.

It is not without hesitation that the varieties in form and colouring represented in the plate are united under one specific name. M. Mörch applies the name *T. muricata* to the pale yellow variety (fig. *d*), and that of *T. ruber* to the Ceylon purple, thick-shelled, flat-whorled variety. We thought at first that the specimen fig. *e* might represent a distinct species, the tube and whorls being rounder and more regularly increasing, and the ridges not being so strongly developed. But having the young specimen (fig. *c*) before us, with the apical whorls purple and smooth, and the lower pale and spinous, while in some parts of the most rounded whorls the ridges could easily be traced, we concluded that the union could be better maintained than the separation. It is not difficult, even with comparatively few specimens, to trace the species through all its forms. The rounded and angular, smooth and spinose, thick and slender, scales without ridges and ridges without scales, the dark purple, yellow, and white colours, the articulated, closed, and simple slit are to be found within a few specimens, and sometimes in a single one.



SILIQUARIA.

PLATE IV.

Species 8. (Mus. Brit.)

SILIQUARIA SENEGALENSIS. *Sil. testâ parvâ, rugosâ, rosâ vel pallidâ fâvâ; tubâ magnitudine mediocrî, vix crescenti; anfractibus regularibus paucis, intus sublevigatis, extus concentricè rugatis; fissurâ spirali articulatâ, tùm versus aperturam simplici.*

THE SENEGAL SILIQUARIA. Shell small, rugose, pink or pale fulvous; tube of middle size, scarcely increasing; regular whorls few, rather smooth on the inner side, concentrically wrinkled on the outer; spiral fissure articulated, then simple towards the aperture.

RECLUS. *Revue Zoologique.*

Tenagoda incisa, Mörch, vix Chemn.

Hab. Senegal, Zanzibar?

In the rosy variety there is a strong resemblance to pink coral; the other varieties are unknown to us.

Species 9. (Mus. Brit.)

SILIQUARIA BERNHARDI. *Sil. testâ albâ, fâvâ-nubulatâ, tenui elongatâ, angustâ et laxè concolatâ, versus apicem irregulariter pyramidatâ; tubâ angustâ, crenulatum striatâ; fissurâ spirali rotundato-articulatâ.*

BERNHARD'S SILIQUARIA. Shell white, clouded with fawn, thin, elongated, narrowly and loosely twisted, irregularly pyramidal towards the apex; tube narrow, crenulately striated; spiral fissure roundly articulated.

MÖRCH.

Hab. Senegal.

A large group in the British Museum, containing hundreds of specimens, testifies to the very-gregarious nature of this species.

Species 10. (Mus. Brit.)

SILIQUARIA ENCAUSTICA. *Sil. testâ parvâ, crassâ, rugosâ, irregulariter pyramidatâ; tubâ parvâ, intus levigatâ, extus incrassatâ, rudè concentricè rugatâ et*

fissuratâ; fissurâ spirali in anfractibus superioribus clausâ, tùm articulatâ, deinde simplici.

THE ENAMELLED SILIQUARIA. Shell small, thick, rugose, irregularly pyramidal; tube small, smooth on the inner side, thickened on the outer, roughly concentrically wrinkled and fissured; spiral fissure closed in the upper whorls, then articulated, afterwards simple.

MÖRCH. *Proc. Zool. Soc.* 1860, p. 498.

Hab. Ceylon.

But for the very strongly-wrinkled exterior, this shell would seem to bear a rather strong resemblance to *S. trochlearis*. In the latter species, however, the slit is articulated throughout.

Species 11. (Mus. Brit.)

SILIQUARIA TOSTUS. *Sil. testâ parvâ, ferrugineâ, ad apicem latensè fuscâ; tubâ angustâ, levissimâ; anfractibus ad apicem orbiculatis; fissurâ spirali, articulatâ, utrinque lineâ denticulatâ marginatâ.*

THE BAKED SILIQUARIA. Shell small, ferruginous, very strong brown at the apex; tube narrow, rather smooth; whorls orbicular at the apex; spiral fissure articulated, bordered on both sides with a denticulated line.

MÖRCH. *Proc. Zool. Soc.* 1860, p. 405.

Hab. Ceylon.

Species 12. (Mus. Brit.)

SILIQUARIA REENTZII. *Sil. testâ parvâ, supernè et ad medium spiralliter pyramidatâ, fuscâ; tubâ parvâ, extus concentricè fissuratâ, fissurâ spirali articulatâ.*

REENTZ'S SILIQUARIA. Shell small, spirally pyramidal above and at the middle, brown; tube small, concentrically fissured outside; spiral fissure articulated.

MÖRCH. *Proc. Zool. Soc.* 1865.

Hab. —?

SILICUARIA.—PLATE IV.

Species 13. (Mus. Brit.)

SILICUARIA TAMIETENSIS. *Sil. testâ lævigatâ, pallidè
fulvâ; tubâ angustâ, laxè contortâ, liratâ, inter
liras cancellatâ; fissurâ spirali angustâ, simplici.*

THE TAHITIAN SILICUARIA. Shell smooth, pale,
fulvous; tube narrow, loosely twisted, ridged,
cancellated between the ridges; spiral fissure
narrow, simple.

MÖRCH. Proc. Zool. Soc.

Hab. South Seas.

We have only a fragment of this species, which M.
Mörch describes as differing from *Sil. lactea* in the
greater size, the stronger ridges, the cancellated in-
terstices, and the narrow slit.

Species not known.

*Sil. dubius, DeFrance; Sil. gigas, Lissou; Sil. porosa,
Boch; Sil. (Ten.) Aquillæ, Mörch; Sil. (Ten.)
cylindrella, Mörch; Sil. (Pyxipoma) Möbi,*
Mörch.

MONOGRAPH

OF THE GENUS

CYRENA.

"Nature is God's pure work, unsullied by sin; and therefore the study of it is a pure delight to those who love Him."—*Dean Goulburn.*



1



2



3

CYRENA.

PLATE I.

Genus CYRENA. *Lamarck*.

Species 1. (Mus. Brit.)

MOLLUSCACEPHALOPODA, bimusenlar, fluviatile vel subfluviatile. Testâ æquivalvis, inequilateralis, crassa, plus minuse orbicularis, tumida, concentricè sulcata, et rugata, epidermide corvâ, solida indurâ; carinae crasso, dentibus cardinalibus duobus aut tribus, lateralibus elongatis, nonnunquam striatis; palli impressione integrâ, et eie sinuatâ.

MOLLUSCACEPHALOPODA, bimusenlar, fluviatile or subfluviatile. Shell equi- or sub-equilateral, thick, more or less orbicular, tumid, concentrically grooved or wrinkled, covered with a horny solid epidermis; hinge thick, cardinal teeth two or three, lateral elongated, sometimes striated; pallial impression entire, or very slightly sinuated.

The shells composing this genus inhabit rivers and estuaries in tropical America, India, China, Australia, the Philippines and Islands of the Pacific. Although principally of freshwater habits, some are found in brackish water, and in the mud of mangrove swamps.

The distinctions between *Corbicula*, *Batissa*, and *Cyrena* seeming to me scarcely of generic importance, I have united them in this work under one generic term. It may, however, be convenient in the following list of specific numbers to designate the section to which each species belongs:—

Section 1. BATISSA. Lateral teeth straight and of moderate length. Species 1–21, 28.

Section 2. CORBICULA. Lateral teeth long, curved, and angular. Species 45–48, 51–61, 66–70, 72–77, 79–101.

Section 3. CYRENA. 22–27, 29–44, 49, 50, 62–65, 68, 71, 78, 102–114.

CYRENA GIGANTEA. *Cyr. testâ magna, ponderosa, sub-ovata, valdè inequilaterali, irregulariter sulcata, epidermide crassa, nigra indurâ; intâs albâ, incrassatâ, partim purpureo lineatâ; latere valico brevi, postico producto, obscurissimè angulato; carinae lato, dentibus cardinalibus integris, lat. ead. antico brevi; ligamento magno, elongato.*

THE GIANTIC CYRENA. Shell large, ponderous, rather oval, very inequilateral, irregularly grooved, covered with a thick black epidermis; interior white, thick, tinted in parts with purple; anterior side short, posterior produced, very obscurely angular; hinge broad, cardinal teeth entire, anterior lateral short; ligament large, long.

PRIME. MS. Brit. Mus.

Hab. Philippines?

This species, having a short lateral tooth in front, is not very characteristic of the first or *Batissa* section.

Species 2. (Mus. Brit.)

CYRENA LENTICULARIS. *Cyr. testâ rotundâ, lenticulari, albâ, subequilateralî, irregulariter rugatâ, epidermide solidâ, subviridi, nitenti indurâ, intâs ferè omninò purpureo ciclo suffusâ; carinae subangusto, dente cardinali centrali bifido, lateralibus aequaliter elongatis, compressis, tenuissimè serratis.*

THE LENTICULAR CYRENA. Shell rounded, lenticular, high, subequilateral, irregularly wrinkled, covered with a solid rather green epidermis, suffused within nearly all over with vivid purple; hinge rather narrow, central cardinal tooth bifid, lateral equally elongated, compressed, very finely striated.

DESHAYES. Proc. Zool. Soc. 1854.

Hab. Philippines.



CYRENA.

PLATE II.

Species 3. (Mus. Brit.)

CYRENA TRIQUETRA. *Cyr. testâ subtrigona, alid, subcompressa, lavi, epidermide subviridi, partim nigrescenti induta; latere antico brevissimo, declivi; umbonibus elevatis; latere postico angulato, margine dorsali declivi.*

THE THREE-CORNERED CYRENA. Shell rather trigonal, high, rather flat, smooth, covered with a rather green epidermis, blackish in parts; anterior side very short, sloped; umbones raised; posterior side angular, dorsal margin sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 13.

Hab. Philippines.

Species 4. (Mus. Brit.)

CYRENA ROTUNDATA. *Cyr. testâ rotundâ, tumidâ, inaequilaterali, irregulariter rugatâ et sulcatâ, epidermide solidâ, subviridi, nitenti, medio radiatim striatâ indutâ; intus sparsim violascenti; latere antico brevi, compresso; latere postico tumidissimo, sublevigato, margine laterali subquadrato.*

THE ROUNDED CYRENA. Shell round, tumid, inequilateral, irregularly wrinkled and grooved, covered with a solid, greenish, shining epidermis, radiately striated in the middle; sparingly purpled within; anterior side short, compressed; posterior area very tumid, rather smooth, lateral margin rather square.

LEA. Trans. Am. Ph. Soc. Pl. XVII. f. 51.

Hab. East Indies.

More tumid in the middle, and more depressed at the dorsal margin than *Cyrena lenticularis*.

Species 5. (Mus. Brit.)

CYRENA ORESA. *Cyr. testâ subovata, levigatâ, castaneâ, tumidâ, distanter leviter sulcatâ; latere antico brevi, tenuiter rugato, declivi; latere postico obscure triangulato; margine dorsali rectilisculo.*

THE FAT CYRENA. Shell subovate, smooth, chestnut, tumid, distantly slightly grooved; anterior side short, finely wrinkled, sloped; posterior side obscurely three-angled; dorsal margin rather straight.

HINDS. Voy. Sulphur.

Hab. Feejee Islands.

The posterior side is much produced, and the margin modified in shape by the three radiating obscure angles.

Species 6. (Mus. Brit.)

CYRENA KERAUDRENI. *Cyr. testâ magnâ, crassâ, subovata, posticè distanter, anticè crebrè sulcatâ, epidermide nigra indutâ; intus margine cardinali postico purpureo maculato, medio subcylindrico, latere antico brevi, declivi; latere postico producto, subacuminato, ligamento marino, elongato.*

KERAUDREN'S CYRENA. Shell large, thick, subovate, posteriorly distantly, anteriorly closely sulcated; covered with a black epidermis; with a purple spot on the posterior cardinal margin within, somewhat rayed in the middle; anterior side short, sloped; posterior side produced, a little acuminate, ligament very large, long.

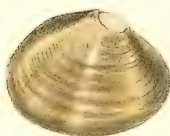
LESSON. Voy. de la Coquille. Pl. II. f. 3.

Hab. Philippines.

Has very much the form and appearance of a large dark Cyprina.



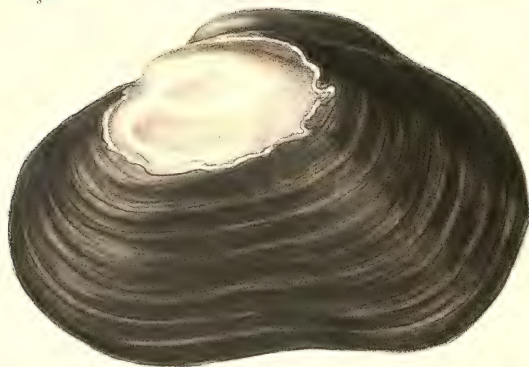
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5^a



6^b



8

CYRENA.

PLATE III.

Species 7. (Mus. Brit.)

CYRENA INSIGNIS. *Cyr. testā elongato-subquadrata, subcompressa, anticā rugis elevatis, undulatis, nonnullis bifurcatis linatā, posticā lævigatā; latere antico brevi, rotundo; latere postico subquadrato, areā dorsali impressā obliquè radiatā; umbonibus depressis; margine ventrali rectiusculo.*

THE WONDERFUL CYRENA. Shell elongated-subquadrate, rather compressed, anteriorly ridged with raised, undulating, some of them bifurcated wrinkles, posteriorly smooth; anterior side short, round; posterior side rather square, obliquely rayed with a dorsal area; umboes depressed, ventral margin rather straight.

DESMAYES. Proc. Zool. Soc. 1854, p. 18.

Hab. Philippines.

The wrinkles on the anterior surface of this shell are very remarkable.

Species 8. (Fig. a, b, Mus. Brit.)

CYRENA MINOR. *Cyr. testā ovato-subrotundā, depressā, compressā, subviridi-stramineā, medio albo bi-radiatā, lævigatā; intus viridè purpureo radiatā; latere antico breviter linatō, brevi, valdè declivi; latere postico laticius; umbonibus obtusis; margine dorsali depresso; cardine angustō, dente laterali antico breviusculo.*

THE SMALLER CYRENA. Shell ovate-roundish, depressed, compressed, greenish straw, with two

white rays, smooth; rayed with bright purple within; anterior side shortly ridged, short, much sloped; posterior side wider; umboes obtuse; dorsal margin depressed; hinge narrow, lateral anterior tooth rather short.

PRIME. MS. Mus. Brit.

Hab. —

This little shell being rayed within and without, and being more depressed at the dorsal margin than most of the group to which it belongs, may show it to be a distinct species, rather than the young of some other.

Species 9. (Mus. Brit.)

CYRENA UNIFORMIS. *Cyr. testā crassā, oblongā, reniformi, subarcuatā, epidermide nigra, rugatā indurata; latere antico brevi, margine dorsali declivi; umbonibus parvis incurvis, depressis, latere postico productō, margine dorsali arcuato, margine ventrali cecato; ligamento maximo.*

THE UNIO-SHAPED CYRENA. Shell thick, oblong, kidney-shaped, rather arched, covered with a black, rough epidermis; anterior side short, dorsal margin sloped; umboes small, incurved, depressed; posterior side produced, dorsal margin arched; ventral margin excavated; ligament very large.

PRIME. Proc. Zool. Soc. 1860, p. 319.

Hab. — ?



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12

CYRENA.

PLATE IV.

Species 10. (Mus. Brit.)

CYRENA INFLATA. *Cyr. testâ tumidissimâ, crassâ, valde inequilaterali, epidermide rugosâ, crassâ, nigrâ indutâ, intus versus marginem densè purpurâ, ad marginem nigrescenti; margine cardinali lato, fulcro latissimo, dente antico brevi, magno; latere antico brevi, angusto; latere postico expanso, inflato, ad marginem biangulato; margine dorsali elevato.*

THE INFLATED CYRENA. Shell very tumid, thick, very inequilateral, covered with a rough, thick black epidermis, deep purple within towards the margin, deepening into black at the margin; cardinal margin broad, fulcrum very broad; anterior tooth short, large; anterior side short, narrow; posterior side expanded, inflated, with two angles at the margin; dorsal margin raised.

PRIME. Proc. Zool. Soc. 1860, p. 20.

Hab. Nicobar Islands.

Species 11. (Mus. Brit.)

CYRENA VENERIFORMIS. *Cyr. testâ ovatâ, solidâ, costatâ, tumidâ; intus purpureo partim suffusâ; latere antico brevi, declivi, ferè usque ad medium subregulariter lirato; latere postico inflato, tumido, ad marginem rotundato; umbonibus prominentibus.*

THE VENUS-SHAPED CYRENA. Shell ovate, solid, chestnut, tumid, suffused with purple inside; anterior side short, sloped, rather regularly ridged as far as the middle; posterior side in-

flated, tumid, rounded at the margin; umbones prominent.

SOWERBY.

Batissa fuscata. Prime.

Cyrena fuscata of Lamarck belongs to the section separated by authors as a genus under the name *Corbicula*. It is a very inconvenient practice, in naming new shells, to repeat a name already applied to a species in what has recently been considered the same genus.

Species 12. (Mus. Brit.)

CYRENA PRODUCTA. *Cyr. testâ magnâ, altâ, subrotundâ, epidermide fusco-subviridi nitenti indutâ, medio lævigatâ, utroque latere distanter sulcatâ; intus rosâ, densè purpurascenti, latere antico brevissimo, arcu depressâ subunulâ, ad marginem sinuatâ; latere postico subquadrato, margine dorsali elevato; umbonibus elevatis, prominentibus, incurvis; ligamento magno, brevi.*

THE PRODUCED CYRENA. Shell large, elevated, rather round, covered with a greenish brown shining epidermis; smooth in the middle, distantly grooved on each side; rose, shading into deep purple within; anterior side very short, sinuated at the margin by a depressed lunule-like area; posterior side rather square, dorsal margin elevated; umbones raised, prominent, turned inwards; ligament large, short.

DESHAYES (*Batissa*). Proc. Zool. Soc. 1854, p. 13.

Hab. — ?



CYRENA.

PLATE V.

Species 13. (Mus. Brit.)

CYRENA AUSTRALIS. *Cyr. testâ ovatâ, crassâ, inflatâ, castaneâ, intus posticè roseo-purpureâ radiatâ; latere antico brevi, angustato, subacuminato, subregulariter lirato, prope marginem dorsalem arèâ depressâ subsinuato; latere postico tumidissimo, radiatim biangulato; umbonibus ovatis, depressis.*

THE AUSTRALIAN CYRENA. Shell ovate, thick, inflated, chestnut, posteriorly rayed with rose-purple within; anterior side short, narrow, rather acuminate, nearly regularly ridged; slightly sinuated near the dorsal margin by a depressed area; posterior side very tumid, radiately biangular; umbones ovate, depressed.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. South Australia.

Species 14. (Mus. Brit.)

CYRENA TENEBROSA. *Cyr. testâ ovato-oblongâ, compressâ; intus posticè densè purpureâ, extus epidermide fumoso-castaneâ indutâ; latere antico brevi, angustato, obtuso, liris acutiusculis rugato; umbonibus depressis; medio laci, complanato; latere postico producto, lato, validè biangulato; margine dorsali rectiusculo, subelevato.*

THE SHADOWY CYRENA. Shell ovate-oblong, compressed; deep purple posteriorly within, covered outside with a smoky chestnut epidermis; anterior side short, narrow, obtuse, wrinkled with rather sharp ridges; umbones depressed, middle smooth, flat; posterior side produced, broad, with two strong angles, dorsal margin somewhat straight, rather raised.

HINDS. Voy. Sulphur.

Hab. Feejee Islands.

Species 15. (Mus. Brit.)

CYRENA VIOLACEA. *Cyr. testâ ovato-oblongâ, subcompressâ, castaneâ, intus violaceo suffusâ; latere*

antico liris distinctis, umaculis intercalatis ad medium extensis sculpto, margine dorsali declivi; latere postico producto, obscurè radiatim triangulato; margine dorsali elevato, arcuato, margine ventrali paulo excavato.

THE VIOLET CYRENA. Shell ovate-oblong, rather compressed, chestnut; suffused with violet within; anterior side sculptured with distinct ridges, some intercalated, extending to the middle, dorsal margin sloped; posterior side produced, with three obscure radiating angles; dorsal margin raised, arched, ventral margin a little excavated.

LAMARCK. Anim. s. Vert. Chénu: Illus. Conch. Pl. VII f. 5.

Hab. Indian Ocean.

There can be little certainty as to the identification of this Lamarckian species. The specimen figured resembles in form and compression the one figured by Chénu as Lamarck's shell. It is, however, uncoated.

Species 16. (Mus. Brit.)

CYRENA FORTIS. *Cyr. testâ subcompressâ, subovatâ, crassâ; intus dentibus lateralibus subaequalibus, elongatis, serratis, cardinalibus bifidis armatâ; extus epidermide viridi-fusâ, crassâ, subrugosâ indutâ; latere antico sulcis crebris sculpto; latere postico sulcis distantibus rugato; latè angulato, post angulum liris divergentibus subuolosis rugato.*

THE STRONG CYRENA. Shell rather compressed, rather oval, thick; armed within with rather equal elongated, serrated, lateral and bifid cardinal teeth, covered outside with a greenish-brown, rather rough epidermis; anterior side sculptured with numerous ridges; posterior side wrinkled with distant sulci; broadly angular, behind the angle wrinkled with diverging, rather nodose ridges.

PRIME. Proc. Zool. Soc. 1860, p. 320.

Hab. New Caledonia.



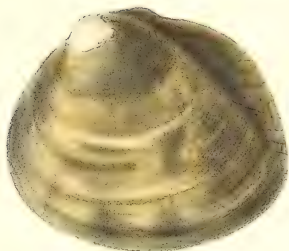
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CYRENA.

PLATE VI.

Species 17. (Mus. Brit.)

CYRENA CHILDRENI. *Cyr. testâ subrotundâ, compressâ, levigatâ, fusco-viridescenti, intâs caraco violaceoque nebulatâ; latere antico brevi, declivi, liris paucis brevibus rugatâ; latere postico subinflato, rotundatim angulatâ; margine dorsali rectiusculo, margine ventrali convexo, margine postico obliquè subquadrato.*

CHILDREN'S CYRENA. Shell rather rounded, compressed, smooth, greenish brown; within clouded with flesh tint and violet; anterior side short, sloped, wrinkled with few short ridges; posterior side rather inflated, roundly angular; dorsal margin rather straight, ventral margin convex, posterior margin obliquely subquadrate.

GEAT. MS. Mus. Brit.

Hab. Philippines.

Species 18. (Mus. Brit.)

CYRENA HUMEROSA. *Cyr. testâ ovato-subtrigona, castaneâ, latere antico brevi, declivi, subacuminato, conspicuè lincato; umbonibus depressis, obtusis; latere postico obtusè biangulatâ, levigatâ, versus angulum posticum tumido, gibboso, margine dorsali elevato, subulatâ.*

THE SHOULDERED CYRENA. Shell ovate-subtrigonal, chestnut, anterior side short, sloped, rather acuminated, conspicuously ridged; umboes depressed, obtuse; posterior side with two obtuse angles, smooth, very tumid and gibbous, dorsal margin raised, somewhat winged.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. — ?

Although a little resembling *Cyr. triquetra*, Desh., this species is not so elevated at the dorsal margin, nor so directly sloped in front.

Species 19. (Mus. Brit.)

CYRENA JAYENSIS. *Cyr. testâ rotundâ, altâ, solidâ, tumidâ, castaneâ, versus marginem viridescenti; latere antico brevissimo, ad marginem arèâ depressâ sinuato, sulcis brevibus rugatâ; umbonibus rotundis, prominentibus; latere postico inflato, rotundo, margine dorsali elevato; ligamento rugoso.*

JAY'S CYRENA. Shell round, high, solid, tumid, chestnut, becoming greenish towards the margin; anterior side very short, sinuated at the margin by a depressed area, wrinkled with short grooves; umboes rounded, prominent; posterior side inflated, round, dorsal margin raised; ligament large.

LEA. Trans. Am. Ph. Soc. Vol. 5. Pl. XVII, f. 52.

Hab. Waigiori.

Species 20. (Mus. Brit.)

CYRENA GRACILIS. *Cyr. testâ subrotundâ, complanatâ, fuscisco-stramineâ, intâs caraculo purpureoque suffusâ; latere antico brevissimo, arèâ depressâ angustâ, superne declivi; latere postico obliquè angulatâ, post angulum liris denticatis distantibus rugatâ; margine dorsali fere recto, margine postico obliquè subtruncato.*

THE SLENDER CYRENA. Shell rather round, flat, smoky straw, within suffused with flesh and purple; anterior side very short, with a narrow depressed area, sloped above; posterior side obliquely angular, wrinkled behind the angle with diverging ridges; dorsal margin nearly straight, posterior margin obliquely truncated.

PRIME. Proc. Zool. Soc. 1860, p. 319.

Hab. — ?

Species 21. (Mus. Brit.)

CYRENA CORBULOIDES. *Cyr. testâ obliquè subtrigona, subcompressâ, altâ, complanatâ; rivide viridifuscescenti; epidermide undulatim striatâ indutâ; latere antico brevissimo, margine laterali valde declivi, umbonibus elevatis; latere postico obscure trigono, margine ventrali rectiusculo.*

THE CORBULA-SHAPED CYRENA. Shell obliquely subtrigonal, subcompressed, high, flat, bright brownish green, covered with a wavy striated epidermis, anterior side very short, lateral margin much sloped downwards, umboes raised; posterior side obscurely trigonal, ventral margin rather straight.

DESHAYES. Proc. Zool. Soc. 1854, p. 14.

Hab. Louisiade Archipelago.



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27

CYRENA.

PLATE VII.

2nd Division, Cyrena proper. Anterior lateral tooth short, not serrated.

Species 22. (Mus. Brit.)

CYRENA PAPUA. *Cyr. testâ ovatâ, compressâ, stramineâ, concentricè subdistanter finibriadim striatâ; versus umbones utrinque arââ impressâ marginalâ; latere antico brevi, rotundo, margine dorsali convexâ, declivi; latere postico producto, radiatim angulatâ, margine dorsali prope umbones convexo, tùm declivi, margine terminali breviter truncato; umbonibus depressis.*

THE PAPUA CYRENA. Shell ovate, compressed, straw-coloured, concentrically rather distantly fringed; bordered on each side near the umbones with an impressed area; anterior side short, round, dorsal margin convex, sloped downwards; posterior side produced, radiately angular, dorsal margin convex near the umbones, then sloped downwards, terminal margin shortly truncated; umbones depressed.

LESSON. Guérin: Mag. Zool. Pl. XI.

Hab. — ?

Species 23. (Mus. Brit.)

CYRENA BENGALENSIS. *Cyr. testâ solidâ, tumidâ, crassâ, subtrigonâ, fusco-nigrescenti, rugoso-striatâ; latere antico alto, brevissimo, declivi, amplo; latere postico producto, margine dorsali longè declivi, ad terminum truncato, ante angulum vix excavato.*

THE BENGAL CYRENA. Shell solid, tumid, thick, subtrigonal, blackish-brown, roughly striated; anterior side high, very short, sloped, full; posterior side produced, dorsal margin with a long slope, truncated at the end, very slightly excavated in front of the angle.

LAMARCK. Anim. sans Vert. Cyrena, 10.

Hab. Bengal.

Species 24. (Mus. Brit.)

CYRENA CYPRINOIDES. *Cyr. testâ magnâ, altissimâ, rotundo-subquadratâ, subcitrinè fusâ, rugoso-striatâ; latere antico brevissimo, subtus umbones excavato, arââ subnullâ impressâ; umbonibus levissimis, ferè terminalibus; latere postico subquadrato, radiatim impresso, margine dorsali arcuato, margine terminali sinuato.*

THE CYPRINA-LIKE CYRENA. Shell large, very high, roundly subquadrated, greenish-brown, roughly striated; anterior side very short, excavated under the umbones, impressed with a lunule-like area; umbones incurved, nearly terminal; posterior side rather square, radiately impressed, dorsal margin arched, terminal margin sinuous.

GRÖY. Voyage de l'Australie. Pl. LXXXII, f. 1-3.

Hab. —

Species 25. (Mus. Brit.)

CYRENA TRIANGULARIS. *Cyr. testâ trigonâ, altissimâ, compressâ, concentricè tenuiter, vixantè radiatim striatâ; latere antico brevissimo, versus marginem centradem acuminatim producto, subtus umbones subexcavato, ferè perpendiculariter declivi; umbonibus altissimis; latere postico versus marginem radiatim impresso, margine terminali subtruncato, margine dorsali longè arcuatim declivi.*

THE TRIANGULAR CYRENA. Shell trigonal, very high, compressed, concentrically finely, minutely, wavyly striated; anterior side very short, acuminately produced towards the ventral margin, somewhat excavated under the umbones, almost perpendicularly sloped; umbones very high; posterior side radiately impressed not far from the margin, dorsal margin with a long, arched slope.

METCALFE. MS. Cum Coll.

Hab. — ?

Species 26. (Mus. Brit.)

CYRENA SINUOSA. *Cyr. testâ subquadratâ, altissimâ, ponderosâ, epidermide fusco-nigrescenti rugoso-striatâ inulatâ; latere antico brevi, infrà subrotundâ; umbonibus ferè terminalibus; latere postico producto, subquadrato, sulcis duobus sinuatis radiatim impressis, margine terminali sinuato, margine dorsali arcuatim declivi.*

THE SINUOUS CYRENA. Shell subquadrated, rather high, ponderous, covered with a blackish-brown roughly-striated epidermis; anterior side short, roundish below, umbones nearly terminal; posterior side produced, rather square, radiately impressed with two sinuated grooves, terminal margin sinuous, dorsal margin sloped with a curve.

DESHAYES. Proc. Zool. Soc. 1854, p. 18.

Hab. Ceylon.



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32

CYRENA.

PLATE VIII.

Species 27. (Fig. a, b, Mus. Brit.)

CYRENA CARDIFORMIS. *Cyr. testâ tenuisculâ, subtriangulâ, profundâ, inflatâ; obscure fuscâ, intus nonnihil purpureo-nebulatâ, costis concentricè subdistanter striatâ; latere postico brevî, cecato, arcu semilunari impresso; latere postico producto, declivi, ad terminum breviter truncato; umbonibus inflatis, rotundis; margine centrali concavo, prope terminum posticum paulo concavo.*

THE HEART-SHAPED CYRENA. Shell rather thin, subtriangular, deep, inflated; dull brown, sometimes clouded with purple inside, outside concentrically rather distantly striated; posterior side produced, sloped, shortly truncated at the end; umboes inflated, rounded; ventral margin convex, a little concave near the end.

DESHAYES. — ? MS. in Cum. Coll.

Hab. Payta, Peru.

Species 28. (Mus. Brit.)

CYRENA DIVERGENT. *Cyr. testâ crassâ, tumidissimâ, nigrescenti, concentricè, undulatum, latè striatâ; intus pallidè carnea; latere antico brevissimo, declivi, subcecarato; umbonibus depressis, fere terminalibus, latere postico tumido, angulato, post angulum et paulo ante decurcatum rugato, margine dorsali arcuato.*

THE DIVERGENT CYRENA. Shell thick, rather tumid, nearly black, with concentric undulating broad striae; pale, fleshy within; anterior side very short, sloped, slightly excavated; umboes depressed, almost terminal, posterior side tumid, angular, behind and a little before the angle divergently wrinkled; dorsal margin arched.

DESHAYES. Proc. Zool. Soc. 1874, p. 17.

Hab. New Guinea.

Species 29. (Mus. Brit.)

CYRENA PANAMAENSIS. *Cyr. testâ inflatâ, globosâ, altâ, fusco-subviridi, latere antico subtus umbones rotundè cecato, infra rotundè producto; umbonibus elevatis, rotundis; margine centrali concavo; latere*

postico angulato, ad angulum obscurissimè carinato, arcu postangulari cecato, planulati.

THE PANAMA CYRENA. Shell inflated, globose, high, greenish-brown; anterior side roundly excavated under the umboes, roundly produced below; umboes elevated, round; ventral margin convex; posterior side angular; very obscurely keeled at the angle, postangular area cornered, flat.

PRIME. — ? MS. Mus. Brit.

Hab. Panama.

Species 30. (Mus. Brit.)

CYRENA MARITIMA. *Cyr. testâ inflatâ, subglobosâ, altissimâ, epidermide papyraceâ indutâ, concentricè striatâ; margine dorsali utrinque declivi; latere postico angulato, ad angulum obtusè carinato; umbonibus rotundis, inflatis.*

THE MARITIME CYRENA. Shell inflated, subglobose, very high, covered with a papyraceous epidermis, concentrically striated; dorsal margin sloped on each side; posterior side angular, with an obscure keel at the angle; umboes rounded, inflated.

C. B. ADAMS. Proc. Zool. Soc. 1854, p. 355.

Hab. — ?

Species 31. (Fig. a and Fig. b, c, Pl. X. Mus. Brit. and Sowerby.)

CYRENA CAROLINIENSIS. *Cyr. testâ altâ, brevî, tumidâ, valdè inflatâ, epidermide rugoso-striatâ, olivaceâ vel pallidè fulvâ indutâ, intus subtus umbones carinâ, ad latera carinâque purpureo-maculatâ et nuditâ; latere antico brevissimo, declivi; umbonibus altis, tumidis, prominentibus; latere postico lato, subtruncato, margine dorsali declivi.*

THE CAROLINA CYRENA. Shell raised, short, tumid, much inflated, covered with a roughly striated olive or pale fulvous epidermis, fleshy within, under the umboes spotted and rayed, with purple at the sides and hinge; anterior side very short, sloped; umboes high, tumid, prominent; posterior side broad, slightly truncated, dorsal margin sloped.

Bosc, Nich. Enc. Am. Pl. I. f. 10.

Hab. S. Carolina, N. America.





CYRENA.

PLATE IX.

Species 32. (Mus. Sowerby.)

CYRENA OLIVACEA. *Cyr. testā tenui, stramineā, subtriangulā, subtriangulā, undulatim striatā, intus purpureā, dentibus cardinalibus parvis, lateralibus anticis breviusculis; latere antico declivi; latere postico angulato, margine dorsali declivi, laterali obliquē truncato, infusā acuminatā, margine centrali ante angulum excavato, umbonibus subcentralibus.*

THE OLIVACEOUS CYRENA. Shell thin, straw-coloured, greenish, subtriangular, undulately striated, inside purple, cardinal teeth small, anterior lateral rather short; anterior side sloped, posterior side angular, dorsal margin sloped, lateral obliquely truncated; acuminate below; ventral margin excavated in front of the angle; umboes nearly central.

CARPENTER. —? MS.
Hab. California.

Species 33. (Mus. Brit.)

CYRENA OBSCURA. *Cyr. testā crassā, trigonā, subconvexā, compressā, epidermide nigra, crassā, densē striatā imbutā; latere antico brevi, subexcavato, arcū lunulari impresso; latere postico angulato, cūldē declivi, margine centrali ante angulum subexcavato.*

THE OBSCURE CYRENA. Shell thick, trigonal, somewhat compressed, much elevated, covered with a black, thick, closely striated epidermis; anterior side short, rather excavated, impressed with a lunular area; posterior side angular, much sloped, ventral margin a little hollow in front of the angle.

PRIME. Proc. Zool. Soc. 1860, p. 321.
Hab. New Granada.

Species 34. (Mus. Brit.)

CYRENA FONTANEL. *Cyr. testā altissimā, subtriangulā, crassā, compressā; densē costatā, striatā; latere antico brevi, declivi, margine centrali rotundo; umbonibus elevatis subcentralibus; latere postico subangulato, cūldē declivi, infusā acuminatā.*

FONTANEL'S CYRENA. Shell very high, subtriangular, thick, compressed; deep chestnut, striated; anterior side short, sloped, ventral margin rounded; umboes elevated, rather acuminate; posterior

side rather acutely angular, much sloped, acuminate below.

D'ORIGNY. —? MS.
Hab. —?

Species 35. (Mus. Brit.)

CYRENA VENTRICOSA. *Cyr. testā subovata, crassā, tumidā, pallide stramineā, levigatā; latere antico brevi, rotundo; latere postico producto, margine dorsali declivi, margine terminali truncato, infusā subconvexa.*

THE VENTRICOSE CYRENA. Shell subovate, thick, tumid, pale straw, smooth; anterior side short, rounded; posterior side produced, dorsal margin sloped, terminal margin slightly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 16.
Hab. Australia.

Species 36. (Mus. Brit.)

CYRENA ESSINGTONENSIS. *Cyr. testā ovatā, castaneā, distanter concentricē fringitā-striatā; latere antico brevi, declivi, arcū lunulari impresso; latere postico producto, margine dorsali arcuato; margine centrali convexo; umbonibus depressis.*

THE PORT-ESSINGTON CYRENA. Shell ovate, chestnut, distantly concentrically fringe-striated; anterior side short, sloped, impressed with a lunular area; posterior side produced, dorsal margin arched; ventral margin convex; umboes depressed.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.
Hab. Port-Essington, Australia.

Species 37. (Mus. Brit.)

CYRENA OBLONGA. *Cyr. testā oblongo-ovata, crassā, undulatim subdistanter striatā, stramineo-rubescens; latere antico breviusculo, subtus umbones excavato, arcū lunulari impresso; latere postico producto, obscure angulato, ad terminum truncato, margine dorsali declivi.*

THE OBLONG CYRENA. Shell oblong-ovate, thick, rather distantly wavyly striated, reddish straw, anterior side rather short, hollow under the umboes, impressed with a lunular area; posterior side produced, with an obscure angle, truncated at the end; dorsal margin sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 341.
Hab. —?



CYRENA.

PLATE X.

Fig. 31, b, c. CYRENA CAROLINIENSIS. (See Pl. VIII.)

Species 38. (Mus. Brit.)

CYRENA NITIDULA. *Cyr. testā ovoid, subcompressā, concentricè tenuiter striatā, stramineā, anticè breviori, subacuminatā, posticè magis expansā, obtusā; umbonibus subdepressis, margine dorsali posticè paulò, anticè caldè declivi.*

THE SHINING LITTLE CYRENA. Shell ovate, subcompressed, concentrically finely striated, straw-coloured, in front rather short, subacuminated, posteriorly more expanded, obtuse; umbones rather depressed, dorsal margin a little sloped behind, much in front.

DESHAYES. Proc. Zool. Soc. 1854, p. 21.

Hab. — ?

Species 39. (Mus. Brit.)

CYRENA SUBLOBATA. *Cyr. testā magnā, crassā, oblongā, epidermide fuscā, rugosā imbutā; latere antico brevissimo, sub umbones arcū lunulari convexo impresso; latere postico producto, radiatim bisulcato, margine dorsali arcuatum declivi, margine terminali leviter sinuatim lobato.*

THE SUBLOBED CYRENA. Shell large, thick, oblong, covered with a brown rough epidermis; anterior side very short, impressed with lunular convex area; posterior side produced, with two radiating grooves, dorsal margin sloped in an arch, terminal margin sinuously slightly lobed.

DESHAYES — ? MS. Cum. Col.

Hab. The Louisiade Archipelago.

In some degree like *Cyrena Cyprinoides*, but more oblong, and having a double groove at the back, which gives a lobed character to the posterior margin.

Species 40. (Mus. Brit.)

CYRENA CALEDONICA. *Cyr. testā subquadratā, crassā, epidermide crassā, rugosā, olivaceo-fusca, subtiliter striatā, striae squamoso-fimbriatis; latere antico brevissimo, arcū lunulari impresso, margine laterali forè perpendiculari; umbonibus subterminalibus; latere postico subquadrato, margine dorsali arcuato, margine terminali sinuato.*

THE CALEDONIAN CYRENA. Shell subquadrate, thick, covered with a thick, rough, olive-brown epidermis, distantly striated, striae with a scaly fringe; anterior side very short, impressed with a lunular area; lateral margin almost perpendicular; umbones nearly terminal; posterior side rather square, dorsal margin arched, terminal margin sinuated.

GASSIES. — ? MS. Brit. Mus.

Hab. New Caledonia.

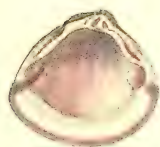
Species 41. (Mus. Brit.)

CYRENA FALLAX. *Cyr. testā obliquè subtriangulā, tumidā, medio distincte, ad latera densè striatā, sordide olivaceā, prope umbones subgibbosā; latere antico brevi, declivi, arcū lunulari, convexo impresso; umbonibus elevatis, ocratis, margine dorsali declivi, margine postico-laterali breviter truncato.*

THE FALLACIOUS CYRENA. Shell obliquely subtriangular, tumid, striated distantly in the middle, closely at the sides, dull olive, rather gibbous near the umbones; anterior side short, sloped, lunule, impressed with a convex lunular area, umbones elevated, oval, posterior area sloped, dorsal margin sloped, postero-lateral margin shortly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 15.

Hab. — ?



CYRENA.

PLATE XI.

(Species 42 inadvertently omitted.)

Species 43. (Mus. Brit.)

CYRENA TRIGONA. *Cyr. testâ ovatâ, subinæquilateralî, stramineâ, concentricè tenuiter striatâ; latere postico majori, subarcuato declivi, prope marginem angulato, margine ventrali convexo; latere antico subacuminato, umbonibus versus marginem anticam inclinatâ; margine antico valdè declivi.*

THE TRIGONAL CYRENA. Shell ovate, rather inequilateral, straw-coloured, concentrically finely striated; posterior side the larger, sloped in a slight curve, angular near the margin, ventral margin convex; anterior side slightly acuminated, umboes inclined towards the anterior margin, anterior margin much sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 344. Hanley, Conch. Ind. Pl. 155.

Hab. Pondicherry.

This is given on the authority of the British Museum (as type) and the Conch. Ind., but the shell is far from being of a trigonal form.

Species 44. (Mus. Brit.)

CYRENA BENSONI. *Cyr. testâ subovatâ, subcompressâ, stramineâ, tenuissimè radiatâ, tenuiter undulatim concentricè rugatâ, æquilateralî; latere antico prope marginem angulato; latere postico angulato, ad angulum divaricatum rugatâ; umbonibus centralibus intus cætesque rubris.*

BENSON'S CYRENA. Shell subovate, subcompressed, straw-coloured, very finely rayed, wrinkled with fine concentric undulations, equilateral; anterior side angulated near the margin; posterior side angular, divergently wrinkled at the angle; umboes central, red inside and out.

DESHAYES. Proc. Zool. Soc. 1876, p. 345.

Hab. River Jamma.

Said to be notable for its general smoothness. To the writer it appears most remarkable for the acutely angular diverging wrinkles on the posterior angle.

Species 45. (Mus. Hanley.)

CYRENA IRRAWADICA. *Cyr. testâ trippon-subovatâ, altâ, ventricosâ, concentricè profundè rugatâ, ad umbones caruloi; infâ olivaceâ, intus purpureâ, umbonibus subcentralibus, elevatis, margine dorsali utrinque declivi; margine ventrali valdè convexo.*

THE IRRAWADDY CYRENA. Shell trigono-subovate, blue at the umboes, olivaceous below, purple within; umboes nearly central, raised, dorsal margin sloped on each side; ventral margin very convex.

BLANDFORD. MS. Hanley. Conch. Ind. Pl. 155.

Hab. River Irrawaddy, Pegu, Ava.

Species 46. (F. a, b, Mus. Sowerby.)

CYRENA EROSA. *Cyr. testâ altissimâ, solidiusculâ, subæquilateralî, trigonâ; intus omnino, prope marginem densissimè purpuratâ, dentibus lateralibus elongatis, serratis, cardinalibus tribus, elongatis; latere antico bæviâ cinctulo, arcuâ semilunatâ, pluvulatâ, latere postico infâ subproducto, umbonibus elevatissimis; liris concentricis distantibus, tenuibus.*

THE TRIANGULAR CYRENA. Shell very high, rather solid, subequilateral, trigonal, purpled within all over, very deeply near the margin; lateral teeth elongated, serrated; cardinal three; anterior side rather short, with a semilunar, flattened area; posterior side a little produced below, umboes much raised; concentric ridges distant, thin.

DESHAYES. MS. Proc. Zool. 1854, p. 354.

Cyrena triangularis. Deshayes?

Hab. —?

Species 47. (a, b, Mus. Sowerby.)

CYRENA RADIATA. *Cyr. testâ altâ, obliquè subtrigonâ, tumidâ, regulariter subdistanter liratâ, intus utrinque radiatim purpureo-fuscatâ; latere antico breviusculo, arcâ depressâ, lunulari; latere postico obliquè paulo producto, radiatim angulato; umbonibus elevatis, acuminatis, marginibus lateralibus declivibus.*

CYRENA.—PLATE XI.

THE RAYED CYRENA. Shell elevated, obliquely sub-trigonal, tumid, regularly rather distantly ridged, radiately banded within on each side with purple; anterior side rather short, with a depressed lunular area; posterior side a little produced obliquely, radiately angular; umboes elevated, acuminate, lateral margins sloped.

HANLEY. —? MS.

Hab. —?

Species 48. (Mus. Hanley.)

CYRENA OCCIDENS. *Cyr. testâ ovatâ, subcompressâ, subdepressâ, inequilaterali, liris subdistantibus, regularibus concentricè rugatâ; intus purpureâ, subtus umboes trinodiâtâ; apice coruleo; epidermide nitenti, subviridi; latere antico breviusculo, coruleo, uniradiâtâ; latere postico paulo producto, subattenuato, ad terminum subtruncato.*

THE SUN-SET CYRENA. Shell ovate, slightly compressed, slightly depressed, inequilateral, concentrically wrinkled with rather distant, regular ridges; purple within, three-rayed under the umboes; apex blue; epidermis shining, greenish; anterior side rather short, with a single ray of blue; posterior side a little produced, rather attenuated, slightly truncated at the end.

BENSON. Deshayes, Cat. Mus. Brit.

Sikkim, Bundelkund.

The umbonal rays from which the name is derived are not always present in the specimens.

Species 49. (Mus. Hanley.)

CYRENA STRIATELLA. *Cyr. testâ subovatâ, subviridi, subcoruleâ, subinflatâ; distanter regulariter rugatâ; umbonibus moderatè elevatis; intus purpureâ; latere antico breviusculo, rotundo, uniradiâtâ; latere postico producto, subtruncato; margine dorsali utrinque declivi.*

THE SMALL-STRIATED CYRENA. Shell subovate, greenish, rather blue, slightly inflated, distantly regularly wrinkled; umboes moderately raised, purple within; anterior side rather short, rounded, single-rayed; posterior side produced, slightly truncated; dorsal margin sloped on each side.

DESHAYES. Proc. Zool. Soc. 1854, p. 344.

Hab. Pondicherry.

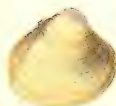
Species 50. (Mus. Hanley.)

CYRENA BENGALENSIS. *Cyr. testâ purâ, ovatâ, roseo-fulvâ, tenuiter liratâ, compressâ; latere antico angusto, subacuminato, breviusculo; latere postico paulo magis producto; umbonibus moderatè declivibus.*

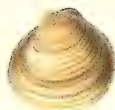
THE BENGAL CYRENA. Shell small, ovate, pinky-fulvous, finely ridged, compressed; anterior side narrow, rather acuminate; rather short; posterior side a little more produced; umboes moderately sloped.

DESHAYES. Proc. Zool. Soc. 1854, p. 344.

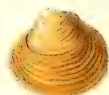
Hab. River Juma.



22



23



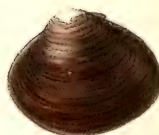
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31

CYRENA.

PLATE XII.

Species 51. (Fig. *a, b*, Mus. Brit.)

CYRENA COR. *Cyr. testā subtrigoni, crassi, tumida, altā; aurantio-fusca, vel grisea, purpureo-fusciatā; tenuiter-sulcata; sulcis versus marginem magis numerosis, ad labra evanidis; latere antico brevi, superius excavato; latere postico producto, angulato, margine dorsali declivi, margine terminali truncato; intus alba, medio purpurea.*

THE HEART CYRENA. Shell subtrigonal, thick, tumid, high, orange-brown, or grey, banded with purple, finely grooved, grooves more numerous towards the margin, fading off at the sides; anterior side short, excavated above; posterior side produced, angular, dorsal margin sloped, terminal margin truncated, white within, purplish in the middle.

LAMARCK. *Anim. sans Vert.*

Cyrena consobrina. Deshayes.

Hab. River Euphrates. (small var.)

Species 52. (Mus. Brit.)

CYRENA RHOMBOIDEA. *Cyr. testā orato-subtrigoni, subdepressā, superius regulariter rugatā, versus marginem leviusculā, latere postico angulato, post angulum complanato, margine dorsali declivi, latere antico brevi; umbonibus levatilis, subacuminatis, margine ventrali rectiusculo.*

THE RHOMBOIDAL CYRENA. Shell ovate, subtrigonal, subdepressed, regularly wrinkled above, rather smooth towards the margin, posterior side angular, flattened behind the angle, dorsal margin sloped; anterior side short; umbones raised, rather raised, slightly acuminated, ventral margin rather straight.

PRIME. Catalogue of Corbiculae, 3, 1863.

Hab. Malacca.

Species 53. (Mus. Brit.)

CYRENA CUMINGII. *Cyr. testā subovatā, inflatā, tenui, subaurantiā, liris distantibus, acutis, hinc-illuc convergentibus rugatā; latere antico brevi, subrotundo; latere postico producto, leviter angulato, ad terminum truncato, margine dorsali declivi.*

CUMING'S CYRENA. Shell rather oval, inflated, thin, rather orange, wrinkled with distant, sharp, here and there concurrent ridges; anterior side short, rather round; posterior side produced, slightly angular, truncated at the end; dorsal margin sloped.

DESHAYES.

Hab. Philippines.

Species 54. (F. *a, b*, Mus. Hanley.)

CYRENA ORIENTALIS. *Cyr. testā solidā, subtrigoniā, altā, liris crassis, rotundis, rugatā, epidermide nitenti, aurantio-olivaceā, nigrescenti, indatā, intus purpureā; latere antico breviusculo, margine laterali declivi; latere postico angulato, caldē declivi, ad terminum truncato.*

THE ORIENTAL CYRENA. Shell solid, subtrigonal, high, wrinkled with thick, rounded ridges; covered with a shining orange-olive blackish epidermis, purple within, anterior side rather short, lateral margin sloped, posterior side angular, much sloped, truncated at the end.

LAMARCK.

Cyrena gluminalis. Müller.

Hab. India, (var. *f, b*), Japan.

Species 55. (Mus. Brit.)

CYRENA YOKOHAMENSIS. *Cyr. testā ovati, solidā, subdepressā, subdistanter concentricē liratā; epidermide nitenti, crassi, nigrescenti indatā, intus purpureā; latere antico brevissimo; latere postico angulato, oblique truncato, subacuminato.*

THE YOKOHAMA CYRENA. Shell ovate, solid, rather depressed, rather distantly concentrically ridged; covered with a thick, shining, blackish epidermis, purple within; anterior side very short, posterior side angular, obliquely truncated, rather acuminated.

SCARFF.

Hab. Yokohama, Japan.

CYRENA.—PLATE XII.

Species 56. (Mus. Brit.)

CYRENA FLUMINEA. *Cyr. testâ subtrigona, altâ, fere æquilaterali, latâ, epidermide subaurantiâ levigatâ indutâ; liris distantibus validis rugatâ; umbonibus elevatis, subacuminatis, margine dorsali atrinque declivi; latere postico obscure angulato, ad terminum truncato; dentibus lateralibus elongatis.*

THE RIVER CYRENA. Shell trigonal, high, nearly equilateral, broad, covered with a smooth, somewhat orange epidermis, wrinkled with distant, strong ridges; umboes raised, slightly acuminated, dorsal margin sloped on each side; posterior side with an obscure angle, truncated at the end; lateral teeth elongated.

LAMARCK. Anin sans Vert. V. VI. p. 274.

Hab. China, &c.

Species 57. (F. a, b, Mus. Hanley and Brit.)

CYRENA PUSILLA. *Cyr. testâ parvâ, ovatâ, albâ, vel purpurascenti, vel fusco-flavâ, subcompressâ, medio tumidâ, tenuissimè rugatâ; latere antico*

breviusculo, latere postico magis producto, subtruncato.

THE DWARF CYRENA. Shell small, oval, whitish or purple, or brownish-yellow, rather compressed, tumid in the middle, very finely wrinkled; anterior side rather short; posterior side more produced, slightly truncated.

PHILIPPI. —? Mus. Brit.

Hab. Upper Nile, Syene.

Species 58. (Mus. Brit.)

CYRENA COMPRESSA. *Cyr. testâ subovatâ, compressâ, concentricè leviter rugatâ, ad latera levigatâ, epidermide pallidâ indutâ; latere antico breviusculo, rotundo; latere postico angulato, obliquè truncato, margine dorsali valdè declivi.*

THE FLATTENED CYRENA. Shell subovate, compressed, concentrically slightly wrinkled, smooth at the sides, covered with a pale epidermis, anterior side rather short, round, posterior side angular, obliquely truncated, dorsal margin much sloped.

MOUSSON. Deshayes, B. M. Cat. 1854.

Hab. Java.



CYRENA.

PLATE XIII.

Species 59. (Mus. Brit.)

CYRENA AFRICANA. *Cyr. testâ subcompressâ, subtri-
gonâ, fuscâ, tenuiter concentricè rugatâ; intus
sordide violaceâ, dentibus lateralibus aequalibus;
apice elevato, margine dorsali utriusque declivi;
margine postico laterali subtruncato; sulcis versus
marginem subnullis.*

THE AFRICAN CYRENA. Shell rather compressed,
somewhat trigonal, brown, finely concentrically
wrinkled, dull violet within; lateral teeth equal;
apex raised, dorsal margin sloped downwards on
each side, posterior lateral margin somewhat
truncated; wrinkles dying out towards the
margin.

KRAUSS. Süd-Afrikanischen Mollusken, p. 8, Tab. I.
f. 8.

Cyrena Guaritziana. Krauss, in correspondence.
Hab. River Guaritz, South Africa.

Species 60. (Mus. Brit.—Hanley.)

CYRENA CASHMIRENSIS. *Cyr. testâ compressâ, altâ,
subtriagonâ, regulariter, profundè, et densè concen-
tricè striatâ, epidermide fusco-nigricanti imbutâ;
intus densè violaceâ, vel albâ; umbonibus rotundis,
elevatis, margine dorsali utriusque declivi, margine
postico laterali subtruncato; margine centrali ro-
tundo; sulcis ad latera vixnullis.*

THE CASHMIRE CYRENA. Shell compressed, raised,
subtriangular, regularly, deeply, and closely concentric-
ally ridged, covered with a blackish-brown
epidermis, deeply violet or white within; umbones
rounded, raised, dorsal margin sloped on each
side, postero-lateral margin rather truncated,
ventral margin rounded; grooves disappearing
at the sides.

DESMAYES, PRIME. Pro. Ac. Nat. Sci. Phil. 1854.
Hab. Cashmere.

M. Hanley has a single valve of this shell densely
purple within; while the specimens in the British
Museum are pure chalky white.

Species 61. (Mus. Sowerby.)

CYRENA LARGILLIERTI. *Cyr. testâ subtriagonâ, tumidâ,
epidermide stramineo-olivaceâ imbutâ, antice sub-
irregulariter rugatâ, postice levissimâ; intus
prope marginem purpureo-fuscatâ; umbonibus
tumidis, purpureo triradiatis, elevatis; margine
dorsali utriusque declivi, margine centrali rotundo;
latere postico truncato, subangulato.*

LARGILLIERT'S CYRENA. Shell trigonal, tumid, covered
with an olive-straw epidermis, anteriorly some-
what irregularly wrinkled, posteriorly rather
more smooth; banded with purple inside near
the margin; umbones tumid, three-rayed with
purple, raised; ventral margin rounded; poste-
rior side truncated, slightly angular.

PHILIPPI. Zeitschrift für Malak. 1844.
Hab. China.

Species 62. (Mrs. Sowerby.)

CYRENA SUMATRENSIS. *Cyr. testâ subovatâ, tumidâ,
concentricè irregulariter rugatâ, epidermide oliv-
aceo-fuscâ, subglabrâ imbutâ; intus albâ, medio
pallidissimè aurantâ, dente cardinali antico
brevisimo, postico magis remoto; latere antico
brevis, margine dorsali declivi; latere postico magis
producto, margine dorsali elevato; umbonibus ob-
tusissimis, depressis.*

THE SUMATRA CYRENA. Shell subovate, tumid, con-
centrically irregularly wrinkled, covered with an
olive-brown slightly leafy epidermis; white
within, very pale orange in the middle; anterior
cardinal tooth very short, posterior more remote;
anterior side short, dorsal margin sloped; pos-
terior side more produced, dorsal margin raised;
umbones very obtuse, depressed.

SOWERBY. Genera of Shells. No. 2.
Cyrena Saigonensis. — ?
Hab. Sumatra.—Saigon, China.

CYRENA—PLATE XIII.

Species 63. (Mus. Brit.)

CYRENA WOODIANA. *Cyr. testā subovatā, altā, obliquā, epidermide crasso, nitenti, olivaceo-nigricanti, aurantio-fuscatā indutā, medio distanter rugatā; latere antico brevissimo, margine dorso-laterali vixitū declivi; umbonibus elevatis, margine ventrali valdē convexo; latere postico producto, angulato, subacuminato, margine ventrali sursum acclivi, margine dorsali longē declivi.*

WOOD'S CYRENA. Shell subovate, high, oblique, covered with a thick, shining, blackish-olive epidermis, banded with orange, distantly wrinkled in the middle; anterior side very short, dorso-lateral margin much sloped; umbones raised, ventral margin very convex; posterior side produced, angular, slightly acuminated, ventral margin sloped upwards, dorsal margin with a long slope.

LEA. Trans. Amer. Phil. Soc. 1832.

Cyrena Primeana. Mörch.

Hab. China.

Cyrena similis, Gray, and *Cyrena granulifera*, Deshayes, both resemble this species, which, however, is much more oval and higher than either. The first-named is a more triangular shell with a radiated angle, while the second holds a middle station between the other two.

Species 64. (Mus. Brit.)

CYRENA SIMILIS. *Cyr. testā ponderosā, subtriangulā, tumidā, irregulariter rugatā, epidermide ferruginea, striatā indutā; latere antico brevi, latere dorsali declivi; latere postico producto, acuminato, subrostrato, angulato, margine laterali longē declivi.*

THE SIMILAR CYRENA. Shell ponderous, subtriangular, tumid, irregularly wrinkled, covered with a ferruginous, striated epidermis; anterior side short, dorsal margin sloped downwards; posterior side produced, acuminated, somewhat beaked, angular; dorsal margin with a long slope.

GRAY. Griffith's *Cuvier*. 1834.

Hab. Philippines.

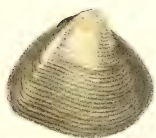
See remark on the preceding species.

Fig. 47, c. (Mus. Hanley.)

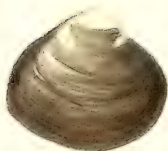
CYRENA RAMATA. Young. See Plate XI. for species.

Fig. 48, b. (Mus. Brit.)

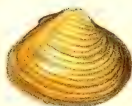
CYRENA OCCIDENTIS var. See Plate XI. for species.



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CYRENA.

PLATE XIV.

Species 65. (Mus. Brit.)

CYRENA RIVALIS. *Cyr. testâ subtriangulâ, solidâ, altâ, regulariter liris appropinquantis ad latera cœnâdis concentricis rugatâ; epidermide dense olivaceo-nigricanti indatâ; latere antico rotundato, infra umbones excavato; latere postico angulato, oblique truncato; umbonibus prominentibus, subroseis.*

THE RIVER CYRENA. Shell subtriangular, solid, high, regularly concentrically wrinkled with approximate ridges, obsolete at the sides; covered with a dark blackish-olive epidermis; anterior side rounded, excavated near the umbones; posterior side angular, obliquely truncated; umbones prominent, rather pink.

VON BUSCH. Phil. Abild. III. 110, Pl. 3, 1849.

Hab. Java.

Species 66. (Mus. Sowerby.)

CYRENA CONFINNA. *Cyr. testâ griseâ, fuscâ, tumidissimâ, subtriangulâ, solidâ, altâ, liris crebris, profundis, ad latera confluentibus rugatâ, intus pallidâ rhodaceâ, ad latera paucis viridatâ; latere antico levî, tumidissimo, infra umbones excavato; latere postico producto, subacuminato, angulato, ad laterânum subtruncato, subrostrato.*

THE NEAT CYRENA. Shell greyish-brown, very tumid, subtriangular, solid, high, wrinkled with close, deep ribs continued at the sides, pale violet within, with a purple ray at each side; anterior side short, very tumid, excavated at the umbones; posterior side produced, slightly acuminated, angular, subtruncated, and beaked at the end.

SOWERBY.

Hab. — ?

I have seen only one specimen of this species. Its locality is unknown.

Species 67. (Mus. Hanley.)

CYRENA GRACILIS. *Cyr. testâ tumidâ, depressâ, ovatâ, tenui, liris irregularibus, majusculis, distantibus, concentricis, ad latera obsolete rugatâ, epidermide*

aurantio-subviridi indatâ, intus ad marginem cardium purpureâ, versus marginem glaciâ; latere postico producto, vix truncato, subacuminato, latere antico rotundo, infra umbones excavato; umbonibus roseis, obtusis.

THE SLENDER CYRENA. Shell tumid, depressed, ovate, thin, wrinkled with irregular, rather large, distant, concentric ridges, obsolete at the sides, covered with a greenish-orange epidermis, inside purple at the hinge margin, yellowish towards the margin; posterior side produced, scarcely truncated, subacuminated, anterior side rounded, excavated beneath the umbones; umbones pinkish, obtuse.

PRIME. American Journal of Conchology, X. 389. 1862.

Hab. Java.

Species 68. (Mus. Brit.)

CYRENA BULLATA. *Cyr. testâ altâ, tumidissimâ, breviusculâ, epidermide rugosâ, tenaciter striatâ fumosofusâ imbutâ; latere antico brevi, subrotundo; latere postico magis producto, obtusè angulato, margine dorsali declivi; umbonibus ovatis, obtusissimis; margine ventrali convexo.*

THE BULLATED CYRENA. Shell high, very tumid, rather short, covered with a rough, finely striated smoky-brown epidermis; anterior side short, rather round; posterior side more produced, obtusely angular; dorsal margin sloped; umbones oval, very obtuse; ventral margin convex.

SOWERBY.

Cyrena insiguis. Deshayes.

Hab. California.

Having already figured a species of *Cyrena* (*Battista*) under the name of *insiguis*, Deshayes, we cannot repeat the name in a second division of what we regard as the same genus.

Species 69. (Mus. Brit.)

CYRENA CYRENIFORMIS. *Cyr. testâ crassâ, altissimâ, subtriangulâ, tumidâ, subobliquâ, distanter rugatâ,*

CYRENA.—PLATE XIV.

epidermide levigatâ fusco-subviridi, intus violaceâ; latere postico oblique producto, angulato, versus marginem levigato; latere antico brevi, declivi, infra umbones arcu levigatâ lunulato; umbonibus productis.

THE CYRENIFORM CYRENA. Shell thick, very high, subtrigonal, tumid, rather oblique, distantly wrinkled, covered with a smooth, greenish-brown epidermis, violet within; posterior side obliquely produced, angular, smooth towards the margin; anterior side short, sloped, with a smooth lunular area; umbones produced.

PRIME — ? (Corbicula) MS. Brit. Mus.

Hab. — ?

It would be better to avoid giving such specific names to species of very closely allied genera as cannot with propriety be used when the genera are considered as one. Such tautologies as the 'Cyrenu-shaped Cyrena' would not then occur.

Species 70. (Mus. Hanley.)

CYRENA SULCATINA. *Cyr. testâ subtrigoniâ, roseo-purpureâ, altâ, tenuissimè sulcatâ striatâ, postico et ad latera breviusculâ, epidermide stramineâ lunatâ, intus purpurco marginatâ; umbonibus elevatis, margine dorsali utrinque declivi, infra umbones arcu pallidâ, planulatâ; antico subexcavatâ; margine ventrali convexo.*

THE FINE-GROOVED CYRENA. Shell subtrigonal, purplish-pink, high, very finely groove-striated, posteriorly and at the sides rather smooth. covered with a straw-coloured epidermis, purple-bordered within; umbones elevated, dorsal margin sloped on each side with a pale, flattened area, slightly excavated anteriorly; ventral margin convex.

DESHAYES. Proc. Zool. Soc. London. 1864.

Hab. China.

Species 71. (Mus. Brit.)

CYRENA GRANDIS. *Cyr. testâ magnâ, ovato-subtrigoniâ, irregulariter rugatâ, subcompressâ, intus et ad umbones roseo-aurantiâ; latere antico brevi; latere postico acuminato, angulato; margine ventrali valdè convexo; margine dorsali utrinque declivi.*

THE LARGE CYRENA. Shell large, ovate-subtrigonal, irregularly wrinkled, compressed within and at the umbones pinky orange; anterior side short; posterior side acuminate, angular; ventral margin convex; dorsal margin sloped on each side.

DESHAYES — ? MS. Brit. Mus.

Hab. — ?

About half way in character between *C. Woodwardiana* and the more beaked and acuminate *C. similis*.



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CYRENA.

PLATE XV.

Species 72. (Mus. Brit.)

CYRENA CRASSULA. *Cyr. testā altissimā, subtrigoniā, angustatā, subarcuatā, tenuiter liratā, crassā, epidermide olivaceā indutā, ad apicem intusque corallē, violaceā; latere postico arcuato, prope marginem lateralem angulato; latere antico subexcavato; umbonibus incurvatis ferè lateraliter terminalibus.*

THE THICK CYRENA. Shell very high, subtrigonal, narrow, rather arched, finely ridged, thick, covered with an olive epidermis; bluish at the tip and inside; posterior side arched, angular near the margin; anterior side somewhat excavated; umboes curved inwards, almost terminal at the side.

MOUSSON —? MS. in Brit. Mus.

Hab. Lebanon.

Species 73. (Mus. Brit.)

CYRENA AMBIGUA. *Cyr. testā subtrigoniā, subequilaterā, olivaceo-nigricantē, moderatè tumidā, tenuiter liratā; latere antico declivi, subcylindrico; latere postico declivi, obscurè biangulato.*

THE AMBIGUOUS CYRENA. Shell subtrigonal, blackish-olive, moderately tumid, finely ridged; anterior side sloped downwards, rather round; posterior side sloped downwards, with two obscure angles.

DESHAYES. Proc. Zool. Soc. London. XXII. p. 345.

Hab. River Euphrates.

Species 74. (Mus. Sowerby.)

CYRENA MANILENSIS. *Cyr. testā crassā, subrhomboidē, distanter liratā, versus umbones griseā, versus marginem subaurantē, intus albā corallēcenti, epidermide nitenti indutā; latere antico brevi, margine dorsali declivi, laterali brevi, truncato; latere postico producto, margine dorsali declivi, terminali truncato; umbonibus rotundis.*

THE MANILLA CYRENA. Shell thick, rather rhomboidal, distantly grooved, grey towards the umbones, somewhat orange, bluish-white within,

covered with a shining epidermis; anterior side short, dorsal margin sloped, lateral short, truncated; posterior side produced, dorsal margin sloped, terminal, truncated; umbones round.

PHILIPPI. Abild. Zeit. f. Malak. 1841.

Hab. Manilla.

Species 75. (Mus. Brit.)

CYRENA NEPEANENSIS. *Cyr. testā subrhomboidē, fuscā vel aurantā, rectā, laticulatā, compressā; latere antico breviusculā; latere postico magis producto, latē truncato; apice parvo, subaristato, margine dorsali utrinque leviter declivi; margine ventrali rectiusculā.*

THE NEPEAN CYRENA. Shell rather rhomboidal, brown or orange, straight, smooth, compressed; anterior side rather short; posterior side more produced, broadly truncated; apex small, somewhat acuminate; dorsal margin slightly sloped on each side; ventral margin rather straight.

LESSON —? MS. Brit. Mus.

Hab. River Nepea.

Species 76. (Mus. Brit.)

CYRENA REGULARIS. *Cyr. testā pallidā, subcavatā, subdepressā, regulariter corallē liratā; latere antico breviusculā, subaristato, infra umbonem excavatā; latere postico latē truncato, margine dorsali declivi; umbonibus obtusis, depressis.*

THE REGULAR CYRENA. Shell pale, rather oval, rather depressed, regularly, closely ridged; anterior side rather short, slightly acuminate, excavated below the umbones; posterior side broadly truncated, dorsal margin sloped; umbones obtuse, depressed.

PRIME —? MS. Brit. Mus.

Hab. —?

Species 77. (Mus. Brit.)

CYRENA OVALINA. *Cyr. testā ovatā, tumidā, epidermide nitenti, nigrescenti indutā, rugis distantibus, saepe*

CYRENA.—PLATE XV.

rioribus validis, continuis, versus marginem ventralen emiculis, posticè obsolete indutà; latere antico breviusculo, rotundo; latere postico producto, latè truncato; umbonibus obtusissimis, margine dorsali utrinque lavigato, margine ventrali repulitè convexo.

THE OVAL CYRENA. Shell ovate, tumid, covered with a shining, blackish epidermis dying out towards the ventral margin, posteriorly obsolete; anterior side rather short, rounded; posterior side produced, broadly truncated; umboes very obtuse, dorsal margin smooth on each side, ventral margin equally convex.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. Port Essington, Australia.

Species 78. (Mus. Brit.)

CYRENA MAXIMA. *Cyr. testâ subtrigona, altissimâ, subcompressâ, laevi, rugis paucis, distantibus, posticè emiculis irregulariter cunctis; epidermide flavido-subaurantiâ indutâ; latere antico brevi, arcu lunulari convexâ; latere postico producto, infra medium acuminato, margine dorsali longè declivi, convexo; umbonibus elevatis; margine ventrali prominenter convexo.*

THE VERY LARGE CYRENA. Shell rather trigonal, very high, rather compressed, smooth, irregularly belted with few, distant wrinkles disappearing posteriorly, covered with a yellowish-orange epidermis; anterior side short, lunular area convex; posterior side produced, acuminated below the middle, dorsal margin with a long slope, convex; umboes raised; ventral margin prominently convex.

DESHAYES. Proc. Zool. Soc. 1860, p. 321.

Hab. —?

Species 79. (Mus. Brit.)

CYRENA BRAZILIANA. *Cyr. testâ altâ, tenuissimè liratâ, subrotundâ, intus albâ; latere antico rotundo, laevi; latere postico obliquè producto, margine dorsali longè declivi; epidermide aurantio-stramineâ, costarum angustè fuscis, umbonibus elevatis, versus laterem anticum declinatis.*

THE BRAZILIAN CYRENA. Shell high, very finely grooved, rather rounded; white within, anterior side rounded, short; posterior side obliquely produced, dorsal margin with a long slope; epidermis orange-straw, with narrow bands of chestnut; umboes raised, turned towards the anterior side.

DESHAYES. Cat. Brit. Mus. 1854.

Hab. Brazil.

Species 80. (Mus. Brit.)

CYRENA TENUSTRATIATA. *Cyr. testâ subtrigona, altâ, pallidè fulvâ, ferè lavigatâ, compressâ, obscure tenuissimè striatâ; latere antico brevi, usque ad marginem ventralen declivi, margine ventrali rotundo, producto, latere postico declivi, producto, infra medium subacuminato, margine ventrali sursum aclivi; umbonibus elevatis.*

THE FINE-STRIATED CYRENA. Shell subtrigonal, high, pale fulvous, almost smooth, compressed, obscurely, very finely striated; anterior side short, sloped down to the ventral margin; ventral margin round, produced, posterior side sloped downwards, produced, slightly acuminated below the middle, ventral margin sloped upwards; umboes elevated.

PRIME. Proc. Zool. Soc. 1860, p. 323.

Hab. —?

Species 81. (Mus. Brit.)

CYRENA PARACENSIS. *Cyr. testâ altissimâ, angustâ, liris irregularibus posticè emiculis rugulâ, obscure olivaceâ, intus purpurâ; latere antico brevissimo, margine laterali rectiusculo; latere postico, margine dorsali breviter declivi, margine laterali obliquè declivi; margine ventrali subconvexo.*

THE PARACA CYRENA. Shell very elevated, narrow, wrinkled with irregular ridges, posteriorly fading, obscurely olivaceous, purple within; anterior side very short, lateral margin rather straight; posterior side, dorsal margin shortly sloped, lateral margin obliquely sloped; ventral margin rather convex.

D'ORMENT —? MS. Brit. Mus.

Hab. Paraca.



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CYRENA.

PLATE XVI.

Species 82. (Fig. a, b, Mus. Brit.)

CYRENA AUSTRALIS. *Cyr. testâ ovato-subtriangulâ, d-pressâ, compressâ, pallidissimâ fuscâ-fulvâ, vel fuscâ, et aurantiâ, irregulariter et leviter rugatâ; latere antico brevi, margine latero-dorsali declivi, brevigatâ; latere postico producto, infra medium acuminatâ, margine dorso-laterali convergèntulo, declivi, brevigatâ.*

THE AUSTRALIAN CYRENA. Shell ovate-subtriangular, depressed, compressed, very pale smoky-fulvous, or brown, or orange, irregularly and slightly wrinkled; anterior side short, latero-dorsal margin sloped, smooth; posterior side produced, acuminate below the middle, dorso-lateral margin rather convex, sloped, smooth.

DESHAYES. Ed. Lamarck.

Hab. Isl. of Timor.

Species 83. (Mus. Brit.)

CYRENA LYDIGIANA. *Cyr. testâ tumidâ, subrotundâ, altitudine latitudine aequantâ, a-quilaterali, regulariter subequaliter et subdistanter rugatâ, infra griseo-subviridâ, suprà nigrescenti, castaneo radiatâ, intus densè violaceâ; umbonibus rotundis, elevatis, margine dorsali utrinque declivi; latere postico infra medium subacuminatâ.*

THE LYDIG CYRENA. Shell tumid, rather rounded, the height equalling the breadth, equilateral, regularly rather equally and distantly wrinkled, greyish-green below, blackish above, rayed with chestnut, deep purple within; umbones rounded, raised, dorsal margin sloped on each side; posterior side rather acuminate below the middle.

PEINCE. Cal. Corb. 3. 1863.

Hab. Siam.

Species 84. (Mus. Brit.)

CYRENA SEMISULCATA. *Cyr. testâ oblongâ, depressâ, fere brevigatâ, leviter partim rugatâ, obscurè fulvâ, ceruleo-fuscatâ, intus densè purpureâ; latere antico brevissimo, infra umbones subexcavato, margine dorsali valdè declivi; latere postico*

producto, oblongo, margine dorsali leviter declivi, margine laterali latè truncato.

THE HALF-GROOVED CYRENA. Shell oblong, depressed, almost smooth, slightly wrinkled in parts, dull fulvous, banded with blue, deep purple within; anterior side very short, slightly hollow under the umbones, dorsal margin much sloped; posterior side produced, oblong, dorsal margin slightly sloped, lateral margin broadly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. Pondicherry.

Species 85. (Mus. Brit.)

CYRENA OBSOLETA. *Cyr. testâ obliquè triangulâ, altâ, tenuissimè striatâ, compressâ, superiè subviridâ, medio rufo-fuscâ, latius purpureâ; latere antico brevi, valdè declivi; umbonibus elevatis, subacuminatis, margine ventrali convexo; latere postico producto, declivi, infra medium acuminatâ.*

THE OBSOLETE CYRENA. Shell obliquely triangular, high, very finely striated, compressed, greenish above, reddish-brown in the middle, purple within; anterior side short, much sloped; posterior side produced; umbones raised, somewhat acuminate, ventral margin convex; posterior side produced, sloped, acuminate below the middle.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. — ?

Species 86. (Mus. Brit.)

CYRENA INCRASSATA. *Cyr. testâ subovâtâ, depressâ, crassâ, subcompressâ, densè fusco-subviridâ, tenuissimè striatâ, fere brevigatâ, anticè distanter tenuiter rugatâ; latere antico brevissimo, infra umbones excavato; umbonibus anticè inclinatâ, depressis; latere postico producto, acuminatâ, margine arcuato declivi.*

THE THICKENED CYRENA. Shell rather oval, depressed, thick, slightly compressed, dark greenish-brown, very finely striated, almost smooth, with distant slender wrinkles; anterior side very short, bel-

CYRENA.—PLATE XVI.

low under the umboes; umboes leaning to the front, depressed; posterior side produced, acuminate, margin sloped in an arch.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. — ?

Species 87. (Fig. a, b, Mus. Brit.)

CYRENA VARIEGATA. *Cyr. testâ altâ, subrotundâ, tenui, subcitrâ et nigra, vel subaurantiâ, nebulis radiisque variegatâ, tenuissimè striatâ, viz rugatâ, latere postico producto, rotundâ, latere antico brevissimo.*

THE VARIEGATED CYRENA. Shell high, rather rounded, thin, greenish or black, or rather orange, variegated with clouds and rays of purple, very finely striated, scarcely wrinkled, posterior side produced, rounded, anterior side very short.

DESHAYES. MS. Mus. Cuming.

Hab. La Plata.

Species 88. (Mus. Sowerby.)

CYRENA MALLACENSIS. *Cyr. testâ tenui, subrhomboidâ, fumoso olivaceâ, nitenti, regulariter, distanter, acutè rugatâ, intus albâ; latere antico brevi, declivi; latere postico producto, obliquè truncato.*

THE MALACCA CYRENA. Shell thin, subrhomboidal, smoky-olive, shining, regularly, distantly, sharply wrinkled, white within; anterior side short, sloped; posterior side produced, obliquely truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 343.

Hab. Malacca.

Species 89. (Mus. Hanley.)

CYRENA NITENS. *Cyr. testâ subaurantiâ, nitenti, compressâ, subdepressâ, obliquè trigonâ, tenuiter subcatâ, intus et ad umbones subrosâ; latere antico brevi, rectiusculo, valdè declivi; latere postico obliquè producto, margine dorsali longè declivi, ad marginem ventralem acuminato; margine ventrali rectiusculo.*

THE SHINING CYRENA. Shell rather orange, shining, compressed, rather depressed, obliquely trigonal, finely grooved, rather pink at the umboes; anterior side short, rather straight, much sloped; posterior side obliquely produced, dorsal margin with a long slope, acuminate at the ventral margin; ventral margin rather straight.

DESHAYES. MS. Cum. Coll.

Hab. — ?



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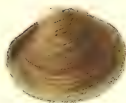
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CYRENA.

PLATE XVII.

Species 90. (Mus. Hanley.)

CYRENA ANGASI. *Cyr. testā orato-oblongā, subrhomboidē, tenui, depressā, subcompressā, intus et ad apicem subrosā vel cinerā, epidermide flavidā tenui indutā; latere antico brevi, angustē subtruncato; latere postico producto, obtusē angulato, latē truncato.*

ANGAS'S CYRENA. Shell ovate-oblong, somewhat rhomboidal, thin, depressed, rather compressed, pinky or ashy within and at the apex, covered with a thin yellowish epidermis; anterior side short, narrowly subtruncated; posterior side produced, obtusely angular, broadly truncated.

PRIME. Cat. Corb. 1863, p. 4.

Hab. Murray River, South Australia.

Species 91. (Mus. Hanley.)

CYRENA JAPONICA. *Cyr. testā altā, trigonā, compressā, subsolidā, nitentē, fuscoscutineā, sulcis partim obsolete rugatā; intus versus apicem purpureo strigatā, ad latera marginemque cavolei; latere antico valdē declivi, breviori, latere postico obtusē angulato, obliquē truncato, superiō declivi.*

THE JAPAN CYRENA. Shell high, trigonal, compressed, rather solid, shining, smoky chestnut, wrinkled with partly obsolete grooves, striped with purple inside towards the apex, bluish at the sides and edge; anterior side much sloped, shorter; posterior side obtusely angular, obliquely truncated, superiō declivi.

PRIME. Ann. Lyc. New York, 1864.

Hab. Japan.

A beautiful little shell, having much the aspect of a young *Cytherea*.

Species 92. (Mus. Hanley.)

CYRENA TUMIDA. *Cyr. testā subtrigonā, altā, tenui, subequilateralī, tumidā, irregulariter distanter rugatā, ad latera purpureo-fuscatā, epidermide aurantiā indutā, intus et ad apicem densē purpureā; latere postico longiusculo, obtusissimē angulato.*

THE TUMID CYRENA. Shell trigonal, high, thin, somewhat equilateral, tumid, irregularly distanty

wrinkled, purple-brown at the sides, covered with an orange-brown epidermis, deep purple within and at the apex; posterior side rather long, very obtusely angular.

DESIHAYES. Proc. Zool. 1854, p. 343.

Hab. Borneo.

Species 93. (Mus. Hanley.)

CYRENA ARATA. *Cyr. testā oratā, tenuissimā, rosacē, tumidissimā, liris magnis, distantibus ad latera subobliquē terminantibus rugatā, epidermide aurantiā-flavidā indutā; latere antico rotundo, valdē inflato; latere postico magis producto, subattenuato, angustē truncato.*

THE FLOUGHED CYRENA. Shell ovate, very thin, pinky, very tumid, wrinkled with large, distant ridges, terminating rather obliquely at the sides, covered with an orange-yellow epidermis; anterior side rounded, much inflated; posterior side more produced, slightly attenuated, narrowly truncated.

BLANFORD. — ? MS. Hanley Coll.

Hab. Tenasserim.

Species 94. (Mus. Hanley.)

CYRENA PROLONGATA. *Cyr. testā orato-subtrigonā, depressā, elongatā, compressā, tenuissimē liratā, epidermide tenui, stramineā, indutā, intus subcerulea, altā; latere antico brevi, declivi, latere postico attenuato, subacuminato.*

THE LENGTHENED CYRENA. Shell ovate-subtrigonal, depressed, elongated, compressed, very finely ridged, covered with a thin straw-colored epidermis, bluish white within; anterior side short, sloped; posterior side attenuated, subacuminated.

PRIME. — ? MS. Hanley's Collection.

Hab. Wide Bay, Australia.

Species 95. (Mus. Hanley.)

CYRENA MÜLLERIANA. *Cyr. testā subrotundā, altissimā, tumidā, intus et lirisque densē purpureā, epidermide subcinerā, nitentē indutā, liris valdē distantibus, nonnullis concurrentibus rugatā; umbonibus feri centralibus, elevatis, margine dorsali utriusque declivi.*

CYRENA.—PLATE XVII.

MÜLLER'S CYRENA. Shell rather round, very high, tumid, deep purple within and without, covered with a greenish shining epidermis, wrinkled with strong, distant ridges, some of them running into each other; umboes nearly central, raised, dorsal margin sloped downwards on each side.

PRIME. — ? MS. Hanley's Collection.

Hab. Fuh Chan, China.

Species 96. (Mus. Hanley.)

CYRENA LIMOSA. *Cyr. testâ alta, ovato-subrotundâ, compressâ, tenuiter lîcatâ, ferè æquilatrali, intus extrinseque purpureâ, epidermide subviridi vel nigricanti indutâ; latere antico quàm posticum breviori, margine dorsali convexo-declivi; latere postico subrotundo, margine dorsali paulo elevato; umboibus versus latus anticum inclinatis, margine ventrali convexo.*

THE MUDDY CYRENA. Shell high, ovate-subrotund, compressed, finely ridged, almost equilateral, purple inside and out, covered with a greenish or blackish epidermis; anterior side shorter than posterior, with dorsal margin convexly sloped; posterior side rather rounded, dorsal margin a little raised; umboes leaning towards the anterior side, ventral margin convex.

MATON. Hanley, in Photographic Illustrations.

Hab. La Plata.

Species 97. (Mus. Brit.)

CYRENA MOUSSONIANA. *Cyr. testâ ovatâ, subcompressâ, tenuissimâ, medio lîratâ, ad latera levigatâ, epidermide densè olivaceâ vel flavidâ indutâ, intus albâ; latere antico brevi, rotundo; latere postico producto; margine dorsali rectiusculo, paulo declivi, margine laterali latè truncato.*

MOUSSON'S CYRENA. Shell ovate, rather compressed, rather thin, ridged in the middle, smooth at the sides, covered with a dark olive or rather yellow epidermis, white within; anterior side short, round, posterior side produced; dorsal margin rather straight, a little sloped, lateral margin broadly truncated.

DESHAYES. — ? MS. Brit. Mus.

Hab. — ?

Species 98. (Mus. Brit.)

CYRENA FRAGILIS. *Cyr. testâ oblongâ, tenuissimâ, densè subviridi, liris distantibus subobliquis, posticè cyanidis, nonnullis concurrentibus rugatâ, intus albâ; latere antico brevi, infra umboes excavato; latere postico oblongo, margine dorsali leviter declivi, margine terminali latè, obliquè truncato.*

THE FRAGILE CYRENA. Shell oblong, very thin, deep greenish, wrinkled with distant, rather oblique ridges disappearing posteriorly, some running into each other, white within; anterior side short, hollowed beneath the umboes; posterior side oblong, dorsal margin slightly sloped, terminal margin broadly, obliquely truncated.

DESHAYES. — ? MS. Brit. Mus.

Hab. — ?

Species 99. (Mus. Brit.)

CYRENA SQUALIDA. *Cyr. testâ tenui, oblongâ, depressâ, compressâ, epidermide sordidè olivaceâ, violaceo-nebulatâ indutâ, ad latera lævigatâ, medio irregulariter rugatâ; latere antico brevi, rotundo, infra umboes excavato, latere postico producto; margine dorsali declivi, margine laterali obliquè truncato, infra subacuminato.*

THE SQUALID CYRENA. Shell thin, oblong, depressed, compressed, covered with a dirty olive epidermis clouded with violet, smooth at the sides, irregularly wrinkled in the middle; anterior side short, rounded, hollowed under the umboes; posterior side produced, dorsal margin sloped, lateral margin obliquely truncated, slightly acuminated below.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. — ?

Species 100. (Mus. Brit.)

CYRENA SALMACIDÆ. *Cyr. testâ donaciformi, tenui, levigatâ, albâ, purpureo-nebulatâ; latere antico alto, brevissimo, umboibus acutis, margine dorsali valdè declivi, latere postico producto, acuminato.*

THE SALMACIDIAN (?) CYRENA. Shell donax-shaped, thin, smooth, whitish, clouded with purple; anterior side high, very short; umboes acute, dorsal margin much sloped, posterior side produced, acuminated.

MORELET — ? MS. Brit. Mus.

Hab. — ?



CYRENA.

PLATE XVIII.

Species 101. (Mus. Brit.)

CYRENA OVALIS. *Cyr. testâ tenui, ovata, subequilaterali, regulariter, dense lirate, epidermide olivaceo-nigricanti, nitenti indurâ, intus purpureâ; latere antico brevissimâ, rotundâ; latere postico latè subtruncato; umbonibus elevatis, purpureo perpendiculariter fasciatis.*

THE OVAL CYRENA. Shell thin, ovate, subequilateral, regularly and very closely ridged, covered with an olive-blackish, shiny epidermis, purple within: anterior side the shorter, rounded; posterior side broadly subtruncated; umboes raised, perpendicularly banded with purple.

PRIME. Journal de Conchyliologie, Pl. 2, f. 6.

Hab. —?

The ridges in this corbicula are more fine, close, and continuous than either of the two similarly shaped species.

Species 102. (Mus. Brit.)

CYRENA FLORIDANA. *Cyr. testâ brevi, altâ, crassâ, tumidissimâ, inequilateraliter subtrigona, levigatâ, subtus epidermidem roseâ, intus carneâ, epidermide flavido-fusca, castaneo maculatâ; latere postico declivi angulato, ad angulum ferè carinato, infèrâ acuminatâ; umbonibus tumidis, elevatis; latere antico brevi, declivi.*

THE FLORIDA CYRENA. Shell short, high, thick, very tumid, inequilaterally trigonal, smooth, pinky under the epidermis, flesh-coloured within; epidermis yellowish fawn, spotted with chestnut; posterior side sloped, almost keeled at the angle, acuminate below; umboes tumid, raised; anterior side short, sloped.

CONRAD. Freshwater Shells of United States.

Hab. Florida.

Species 103. (Mus. Brit.)

CYRENA ISOCARDIODES. *Cyr. testâ brevi, altissimâ, tenui, tumidissimâ, superiôrè subtrigona, epidermide lævigatâ, tenui, corneâ indurâ, intus ad carinam et subtus umbones purpureâ; latere antico brevissimo, subtus umbones excavato, versus medium valdè inflato; umbonibus subdistantibus, latere*

postico substrato, angulato, truncato, margine ventrali valdè convexo.

THE ISOCARDIA-LIKE CYRENA. Shell short, very high, thin, very tumid, triangular at the upper part, covered with a smooth, thin, horny epidermis, purple inside at the hinge, and under the umboes; anterior side very short, excavated beneath the umboes; umboes a little distant, posterior side rather beaked, angular, truncated; ventral margin very convex.

DESHAYES —? MS. Cnm. Col.

Hab. —?

Species 104. (Mus. Brit.)

CYRENA SOLIDA. *Cyr. testâ crassâ, magnâ, breviter subrhomboidè, tum dissimâ, epidermide tenuissimâ indurâ, antici leviter rugatâ; latere antico brevissimo, umbonibus ferè terminalibus; latere postico producto, obtusè angulato; margine latero-dorsali elongato, arcuato; margine ventrali convexo, versus angulum posticum sarsum acclivi.*

THE SOLID CYRENA. Shell thick, large, shortly subrhomboidal, very tumid, covered with a very thin epidermis, anteriorly lightly wrinkled; anterior side very short, umboes nearly terminal, posterior side produced, obtusely angular; dorsal margin lengthened, arched; ventral margin convex, sloped up towards the posterior angle.

DESHAYES —? MS. Cnm. Coll.

Hab. Australia.

Species 105. (Mus. Brit.)

CYRENA JUKESII. *Cyr. testâ ovatâ, compressâ, lævigatâ, epidermide fusca, crenulatum striatâ indurâ; latere antico brevi; latere postico producto, margine dorsali arcuatum declivi.*

JUKES'S CYRENA. Shell ovate, compressed, smooth, covered with a brown epidermis with crenulated striae; anterior side short; posterior side produced, dorsal margin slightly arched, sloped downwards.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. Port Essington.

CYRENA.—PLATE XVIII.

Species 106. (Mus. Brit.)

CYRENA PLACIDA. *Cyr. testâ ovato-rotundatâ, compressâ, albâ, levigatâ, epidermide striatâ indutâ, ferè æquilaterali, intus pallidè roseâ, lateribus rotundis, umbonibus depressis, obtusissimis.*

THE PLACID CYRENA. Shell ovately rounded, compressed, high, smooth, covered with a striated epidermis, almost equilateral, pale rose within, sides rounded; umboes depressed, very obtuse.

DESHAYES. Proc. Zool. Soc. 1854, p. 19.

Hab. —? Cum. Coll.

Species 107. (Mus. Brit.)

CYRENA NOTABILIS. *Cyr. testâ subrhomboides, depressâ, subcompressâ, tenuiter striatâ, epidermide tenuis-*

simâ indutâ; latere antico brevi, rotundo, infra umboes excavato; latere postico oblongo, angulato, post angulum extus intusque purpureo, margine dorsali paulò declivi, arcuato, margine terminali latè truncato.

THE REMARKABLE CYRENA. Shell subrhomboidal, depressed, rather compressed; finely striated, covered with a very thin epidermis; anterior side short, rounded, excavated under the umboes; posterior side oblong, angular, purple within and without behind the angle, dorsal margin a little sloped, arched, terminal margin broadly truncated.

DESHAYES. Proc. Zool. Soc. 1854, p. 21.

Hab. Payta, Peru.

Having much the form of a *Cypricardia*.



CYRENA.

PLATE XIX.

Species 108. (Mus. Sowerby.)

CYRENA DONAXIFORMIS. *Cyr. testâ parvâ, tenuissimâ frontâ, trigonâ, valdè inequilaterali; margine dorsali utriusque valvæ declivi, arcu purpureo, utriusque valvæ semilunari; latere antico breviusculo, declivi, subacuminato, latere postico attenuatum producto, ad terminum acuminato.*

THE DONAX-SHAPED CYRENA. Shell small, very finely ridged, trigonal, very inequilateral; dorsal margin much sloped on each side, with a semilunar area of purple on each valve; anterior side rather short, sloped, rather acuminated, posterior side taperingly produced, acuminated at the end.

SOWERBY.

Hab. Florida.

This species belongs to the *Corbicula* group in the character of the hinge.

Species 109. (Mus. Brit.)

CYRENA ANOMALA. *Cyr. testâ tenuissimâ, inflatâ, altâ, subtrigonâ, epidermide tenui, pallidè subviridi indutâ, latè ad eardium et infra umbones purpureo; latere antico inflatâ, rotundâ, brevi; umbonibus inflatis, rotundis, margine centrali valdè convexo; latere postico producto, acutè rostrato, attenuato.*

THE ANOMALOUS CYRENA. Shell very thin, inflated, high, subtrigonal, covered with a thin greenish epidermis, purple within on the hinge and under the umbones; anterior side inflated, rounded, short; umbones inflated, rounded, ventral margin very convex; posterior side produced, sharply beaked, attenuated.

DESHAYES. Proc. Zool. Soc. 1854, p. 51.

Hab. Bay of Camacas.

Very full and globular in front, compressed and narrowed to a point at the back.

Species 110. (Mus. Sowerby, old valves.)

CYRENA MEXICANA. *Cyr. testâ ovatâ, inflatâ, tenui, epidermide obscurè fuscâ indutâ, intèrâ pallidissimè*

carnei, ad latera posticum purpureâ; latere antico brevissimo; medio inflato; latere postico producto, margine latero-dorsali declivi, margine terminali obtuso, obtusissimè angulato.

THE MEXICAN CYRENA. Shell ovate, inflated, thin, covered with a dull brown epidermis, very pale flesh-colour within, purple at the posterior side; anterior very short, middle inflated; posterior side produced, dorso-lateral margin sloped, terminal margin obtuse, very obtusely angular.

BRODERIP and SOWERBY. Zool. Journ. V. 5.

Hab. Mazatlan, Mexico.

Species 111. (Mus. Sowerby.)

CYRENA CEYLONICA. *Cyr. testâ magna, solidâ, subtrigonâ, subcompressâ, altâ, subequilaterali, epidermide tenui, flavidâ, Jimbristum striatâ indutâ; latere postico obtusè biangulato, ante angulum anticum subnecari, post angulum posticum complanato, valdè declivi; latere antico breviusculo, margine latero-dorsali complanato, declivi.*

THE CEYLON CYRENA. Shell large, solid, subtrigonal, subcompressed, high, subequilateral, covered with a thin, yellowish epidermis, with fringed striae; posterior side obtusely two-angled, rather concave in front of the anterior angle; flattened, much sloped behind the posterior angle; anterior side rather short, latero-dorsal margin flattened, sloped.

CHEMINITZ. (Venus) Marl. and Chemn.

Venus ceylanica. Gmel.

Cyrena Zeylanica. Lamareck.

Cyrena pallida. Deshayes.

Hab. Ceylon.

Species 112. (Mus. Brit.)

CYRENA COMITA. *Cyr. testâ ovato-oblongâ, depressâ, tumidâ, crassâ, lucigatâ, epidermide pallidè flavidâ nitentè indutâ; latere antico brevi; latere postico producto, subattenuato, angulato, ante angulum subcompressa, margine dorsali declivi, margine terminali biangulato, truncato.*

THE SPRUCE CYRENA. Shell ovate-oblong, depressed,

CYRENA.—PLATE XIX.

tumid, thick, smooth, covered with a pale yellowish shining epidermis; anterior side short; posterior side produced, rather attenuated, angular, rather flattened in front of the angle; dorsal margin sloped, terminal margin biangular, truncated.

DESHAYES. Proc. Zool. 1854, p. 21.

Hab. — ?

Species 113. (Mus. Sowerby.)

CYRENA BUSCHII. *Cyr. testâ venæformi, ovato-subtri-gonâ, solidâ, subcompressâ, epidermide fusco-flavidiâ fimbriatâ striatâ indutâ; latere antico brevi, prope marginem dorso-lateralem plavulato; latere postico magis producto, margine dorso-laterali arcuato; umbonibus elevatis, versus latus anticum inclinatis.*

VOX BUSCH'S CYRENA. Shell venus-shaped, ovately subtriangular, solid, rather compressed, covered with a brownish-yellow epidermis; anterior side short, flattened near the dorso-lateral margin; posterior side more produced, dorso-lateral

margin arched; umboes raised, leaning towards the anterior margin.

PHILIPPI — ? Adams' Genera.

Lauta. Deshayes.

Hab. — ?

Species 114. (Mus. Brit.)

CYRENA EQUILATERALIS. *Cyr. testâ subtri-gonâ, com-pressâ, altâ, subæquilateralî, fulvo-subaurantiâ, lavigatâ; latere antico breviusculo, declivi, infra umboes excavato; latere postico paulo magis producto, infra acuminato, prope marginem dorso-lateralem angulato.*

THE EQUILATERAL CYRENA. Shell rather trigonal, compressed, high, nearly equilateral, fulvous orange, smooth; anterior side rather short, sloped, hollowed under the umboes; posterior side a little more produced, acuminate below, with an angle near the dorso-lateral margin.

DESHAYES. Proc. Zool. Soc. 1854, p. 20.

Hab. Cayenne.

CYRENA.

	Plate.	Species.		Plate.	Species.
<i>aquilateralis</i> . Deshayes	XIX.	114	<i>Floridana</i> . Conrad	XVIII.	102
<i>Africana</i> . Krauss	XIII.	59	<i>flammea</i> . Lamarck	XII.	56
<i>ambigua</i> . Deshayes	XV.	73	<i>Fontainei</i> . D'Orbigny	IX.	31
<i>Angasi</i> . Prime	XVII.	90	<i>fortis</i> . Prime	V.	16
<i>angulata</i> . Deshayes, not met with			<i>fragilis</i> . Deshayes	XVII.	98
anomala. Deshayes	XIX.	109	<i>fuscata</i> . (Batissa) Prime	IV.	21
<i>arata</i> . Blanford	XVII.	93	<i>galathea</i> . Mörch, not met with		
<i>orbata</i> . Deshayes, not met with			<i>gigantea</i> . Prime	I.	1
<i>Australis</i> . Deshayes (Batissa) * ..	V.	13	<i>gracilis</i> . Prime (Batissa) *	VI.	20
<i>Anstralis</i> . Deshayes (Corbicula) * ..	XVI.	82	<i>gracilis</i> . Prime (Corbicula) *	XIV.	67
<i>Bengalensis</i> . Deshayes (Corbicula) *	XI.	50	<i>grandis</i> . Deshayes	XIV.	71
<i>Bengalensis</i> . Lamarck (Cyrena) *	VII.	23	<i>Guaritziana</i> . Krauss	XIII.	59
<i>Bensoni</i> . Deshayes	XI.	44	<i>humerosa</i> . Deshayes	VI.	18
<i>Braziliana</i> . Deshayes	XV.	79	<i>incrassata</i> . Deshayes	XVI.	86
<i>Bullata</i> . Sowerby	XIV.	68	<i>inflata</i> . Prime	IV.	10
<i>Bussellii</i> . P	XIX.	113	<i>insignis</i> . Deshayes	III.	7
<i>Caledonica</i> . Gassies	X.	40	<i>insignis</i> . Deshayes	XIV.	68
<i>Carolinensis</i> . Bosc	VIII.	31	<i>iravadiana</i>	XI.	45
<i>Cashmirensis</i> . Deshayes	XIII.	60	<i>isocardiodes</i> . Deshayes	XVIII.	103
<i>Ceylanica</i> . Chemnitz	XIX.	111	<i>Japonica</i> . Prime	XVII.	91
<i>Childreni</i>	VI.	17	<i>Jayensis</i> . Lea	VI.	19
<i>coaxana</i> . Guér	XIX.	111	<i>Jukesii</i> . Deshayes	XVIII.	105
<i>compressa</i> . M	XII.	58	<i>Kerandreni</i> . Lesson	II.	6
<i>compta</i> . Deshayes	XIX.	112	<i>Largillierii</i> . Philippi	XIII.	61
<i>concinna</i> . Sowerby	XIV.	66	<i>luta</i> . Deshayes	XIX.	113
<i>consobrina</i> . Cailland	XII.	51	<i>lenticularis</i> . Deshayes	I.	2
<i>cor</i> . Lamarck	XII.	51	<i>limosa</i> . Matou	XVII.	96
<i>corbuloides</i>	VI.	21	<i>Lydigiana</i> . Prime	XVI.	83
<i>cordiformis</i> . Deshayes	VIII.	27	<i>maetroides</i> . Desh., not met with		
<i>crassula</i> . M	XV.	72	<i>Mallaccensis</i> . Deshayes	XVI.	88
<i>Cumingii</i>	XII.	53	<i>Manillensis</i> . Philippi	XV.	74
<i>Cyprinoides</i> . Guay	VII.	24	<i>maritima</i> . C. B. Adams	VIII.	30
<i>Cyrena</i> . P	XVII.	95	<i>maxima</i> . Deshayes	XV.	78
<i>cyreniformis</i> . P	XIV.	69	<i>Mexicana</i> . Broderip and Sowerby	XIX.	110
<i>decipiens</i> . Deshayes, not met with			<i>minor</i> . Prime	III.	8
<i>depressa</i> . Lamarck, not met with			<i>Moussoniana</i> . Deshayes	XVII.	97
<i>divaricata</i> . Deshayes	VIII.	28	<i>Mulleriana</i> . Prime	XVII.	95
<i>donaciformis</i> . Sowerby	XIX.	108	<i>nitens</i> . Deshayes	XVI.	89
<i>erosa</i> . Deshayes	XI.	46	<i>Nepeanensis</i> . Lesson	XV.	75
<i>Essingtonensis</i> . Deshayes	IX.	36	<i>nitidula</i> . Deshayes	X.	38
<i>eximia</i> . Dkr., not met with			<i>notabilis</i> . Deshayes	XVIII.	107
<i>fallax</i> . Deshayes	X.	41	<i>obesa</i> . Hinds	II.	5

* Owing to the separation of Cyrene into separate genera, authors have repeated specific names. The above instances were not observed till too late for avoidance or explanation in the plates.

CYRENA.

	Plate.	Species.		Plate.	Species.
oblonga. <i>Deshayes</i>	IX.	37	salmaciadae. <i>Morelet</i>	XVII.	100
obscura. <i>Prime</i>	IX.	33	semisulcata. <i>Deshayes</i>	XVI.	84
obsoleta. <i>Deshayes</i>	XVI.	85	similis. <i>Gray</i>	XIII.	64
occidens. <i>Benson</i>	XI. XIII.	48	sinuosa. <i>Deshayes</i>	VII.	26
olivacea. <i>Carpenter</i>	IX.	32	solida. <i>Deshayes</i>	XVIII.	104
orientalis. <i>Lamarek</i>	XII.	54	squalida. <i>Deshayes</i>	XVII.	99
ovalina. <i>Deshayes</i>	XV.	77	striatella. <i>Deshayes</i>	XI.	49
ovalis. <i>Prime</i>	XVIII.	101	sublobata. <i>Deshayes</i>	X.	39
pallida. <i>Deshayes</i>	XIX.	111	suborbicularis. <i>Plat.</i> , not met with		
Papua. <i>Lesson</i>	VII.	22	sulcata. <i>Deshayes</i>	XIV.	70
Panamaensis. <i>Prime</i>	VIII.	29	sumatrensis. <i>Sowerby</i>	XIII.	62
Panormitana. <i>Bicon</i> , not met with			tenebrosa. <i>Hinds</i>	V.	14
Paracensis. <i>D'Orbigny</i>	XV.	81	tenuistriata. <i>Prime</i>	XV.	80
Paranensis. <i>D'Orb.</i> , not met with			trigona. <i>Deshayes</i>	XI.	43
Peruviana. <i>Deshayes</i> , not met with			Iravadia. <i>Blanford</i>	XI.	45
Petitiana. <i>Bourg</i> , not met with			triangularis. <i>Metcalf</i>	VII.	25
placida. <i>Deshayes</i>	XVIII.	106	trigonella. <i>Lamck.</i> , not met with		
<i>Prinowana</i> . <i>Mösch</i>	XIII.	63	triquetra. <i>Deshayes</i>	II.	3
producta. <i>Deshayes</i>	IV.	12	tumida. <i>Deshayes</i>	XVII.	92
prolongata. <i>Prime</i>	XVII.	94	turgida. <i>Lea</i> , not met with		
pusilla. <i>Philippi</i>	XII.	57	unioniformis. <i>Prime</i>	III.	9
radiata. <i>Hanley</i>	XI. XIII.	47	Vanikorensis. <i>Quoy</i> , not met with		
<i>Ramondi</i> . <i>Bourg</i> , not met with			variegata. <i>Deshayes</i>	XVI.	87
<i>recurvata</i> . <i>Valenciennes</i> , not met with			veneriformis. <i>Sowerby</i>	IV.	11
regularis. <i>Prime</i>	XV.	76	ventricosa. <i>Deshayes</i>	IX.	35
rhomboiden. <i>Prime</i>	XII.	52	violacea. <i>Lamarek</i>	V.	15
rivalis. <i>Von Büsch</i>	XIV.	65	Woodiana. <i>Lea</i>	XIII.	63
rotundata. <i>Lea</i>	II.	4	Yokohamensis	XII.	55
Saigonensis — ?	XIII.	62	<i>Zeylanica</i> . <i>Lamarek</i>	XIX.	111

MONOGRAPH
OF THE GENUS
SPHÆRIUM.

"While Thou, by Whom were all things made, we praise

For ever, and tell out in sweetest lays

An endless Alleluia."—*Noble.*



SPHÆRIUM.

PLATE I.

Genus SPHÆRIUM. *Scopoli.*

MOLLUSCUM ACEPHOLOPODUM, BIMUSCULOSUM, FLUVIATILE, SIPHONICUS SEPARATIS. *Testa tenuis, intus tenuiter testacea, extus cornea, apiculatâ, fere æquilatralis, plerumque inflata. Cardio utriusque lateris dentibus duobus cardinalibus divergentibus, lateralibus elongatis, compressis, duplicatis et simplicibus. Pallii impressionibus integris.*

MOLLUSC ACEPHOLOPODUS, BI-MUSCULAR, FLUVIATILE, WITH SEPARATED SIPHONS. Shell thin, thinly shelly within, horny without, equi-valve, nearly equilateral, generally inflated. Hinge in each valve with two cardinal diverging teeth, lateral teeth, two and one in each valve, elongated, compressed. Pallal impression entire.

Synonym. *Cyclas*. Bruguière.

The chief difference between this genus and Pisidium is to be found in the siphons of the animal, which are divided in the former, and separated in the latter. The shells, however, are in general to be distinguished by those of the present genus being less oblique, and more equilateral. Wherever there are rivers and lakes, are also to be found shells of the *Sphærican* genus, excepting, perhaps, in the torrid regions. They abound in Europe and North America. The British Museum, largely reinforced by the Cumingian Collection, presents a large array of species which are given in this monograph, besides others which are accessible to me; still, however, leaving some which cannot be got together for identification.

Species 1. (Mus. Brit.)

SPHÆRIUM STEINBUCHII. *Sph. testâ parvâ, politâ, sub-obliquâ, semipellucidâ, pallidâ; latere postico obliquè productâ, margine dorsali declivi; latere antico breviusculo; umbonibus prominentibus, versus laterem anticum inclinatis.*

STEINBUCH'S SPHÆRIUM. Shell small, polished, rather oblique, semipellucid, pale; posterior side obliquely produced, dorsal margin sloped; anterior

side rather short; umbos prominent, leaning towards the anterior side.

MÛLLER. Adams. Geneva.

Hab. Greenland.

Species 2. (Mus. Brit.)

SPHÆRIUM TRANSVERSUM. *Sph. testâ transversè ovatâ, pallidè corneâ, tenui, opacâ, umbonibus ovatis, subcentralibus, margine dorsali rectiusculo; latere antico breviusculo, marginibus lateralibus sub-truncatis, margine ventrali convexo.*

THE TRANSVERSE SPHÆRIUM. Shell transversely ovate, pale horn, thin, opaque, umbos ovate, subcentral, dorsal margin rather straight; anterior side rather shorter, posterior lateral margin, a little obliquely truncated, ventral margin convex.

SAT. Proc. Acad. Nat. Sci. Phil. 1862.

Hab. United States.

Species 3. (Mus. Brit.)

SPHÆRIUM RIVALIS. *Sph. testâ rectiusculâ, subæqui-laterali, inflatâ, transversâ, corneâ, fusco-subviridi, fasciatâ; umbonibus ovatis, marginis; margine ventrali recto, lateribus subtruncatis.*

THE RIVER SPHÆRIUM. Shell rather straight, nearly equilateral, inflated, transverse, horny, banded with greenish brown; umbos oval, large; ventral margin straight, sides rather truncated.

Drap. Moll. Pl. X.

Hab. Europe.

Generally regarded as a variety of *Sphærium corneum*, but more transverse and rhomboidal.

Species 4. (Mus. Sowerby.)

SPHÆRIUM RIVICOLUM. *Sph. testâ magnâ, ovatâ, tenuiter sulcatâ, intensè fusco-viridi, intus medio carneâ, versus marginem ceruleâ; umbonibus subcentralibus, obtusis, margine dorsali utriusque declivi.*

THE RIVER-DWELLING SPHÆRIUM. Shell large, oval,

SPLÆRIUM.—PLATE I.

finely grooved, deep greenish-brown, within fleshy in the middle, blue towards the margin; umboes rather central, obtuse, dorsal margin sloped at both sides.

LAMARCK. Anim. s. Vert.

Cyclas corneum. Dilwyn.

Hab. Great Britain. Europe generally.

Species 5. (*f, a, b*, Pl. V. Mus. Brit.)

SPLÆRIUM LACUSTRE. *Sph. testâ oratâ, inflatâ, pallidâ, leri, latere antico breviori, latere postico vix obliquè truncato, margine dorsali subrecti.*

THE PALE SPLÆRIUM. Shell ovate, inflated, pale, smooth, anterior side shorter; posterior side, scarcely obliquely truncated, dorsal margin a little sloped.

DEAPARNAUD. Hist. Moll. p. 130, Pl. X. f. 6, 7.

Cyclas ovalis. Ferrussac.

Cyclas pallidum. Gray.

Hab. Regent's Park, London. France.

Species 6. (Mus. Sowerby.)

SPLÆRIUM LENTICULARIS. *Sph. testâ subcompressâ, pallidâ, breviter oratâ, corneo-griseiscenti, altâ; umbonibus subcentralibus, margine dorsali utrinque declivè, margine postico obtusissimè truncato.*

THE LENTICULAR SPLÆRIUM. Shell rather compressed, polished, shortly oval, greyish horn, high; umboes rather central, dorsal margin sloped on each side; posterior margin very obtusely truncated.

SOWERBY.

Hab. —? We have no locality for this rather peculiar shell.

Species 7. (Mus. Brit.)

SPLÆRIUM SULCATUM. *Sph. testâ magis, inflatâ, sub-rhomboidè, rotulâ subrotâ, fusco-subviridi, transversâ; umbonibus subcentralibus, prominentibus; margine dorsali utrinque paulo declivè, marginibus lateraliibus obliquè subtruncatis, margine ventrali rectiusculo.*

THE GROOVED SPLÆRIUM. Shell large, inflated, rhomboidal, strongly sulcated, greenish brown, transverse; umboes nearly central, prominent; dorsal margin a little sloped on each side;

lateral margins a little truncated obliquely; ventral margin rather straight.

LAMARCK. Anim. s. Vert.

Hab. Massachusetts.

Species 8. (Mus. Hanley.)

SPLÆRIUM INDICUM. *Sph. testâ subrotundâ, pallidâ, leri, altiusculâ; umbonibus subcentralibus, prominentibus, rotundis, margine ventrali convexo, margine dorsali posticè rectiusculo.*

THE INDIAN SPLÆRIUM. Shell rather rounded, pale, smooth, rather high; umboes rather central, prominent, rounded, ventral margin convex, dorsal margin rather straight posteriorly.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. Loodiana, India.

Species 9. (Mus. Brit.)

SPLÆRIUM SCALDIANUM. *Sph. testâ oblongo-subquadrata, pallidè aurantâ, tumidâ, brevitatâ, subinequilaterali, latere antico breviori; umbonibus prominentibus; margine dorsali postico rectiusculo, margine ventrali rectiusculo.*

SCALDI'S SPLÆRIUM. Shell oblong-subquadrate, pale orange, tumid, smooth, rather inequilateral, anterior side shorter; umboes prominent, postero-dorsal margin rather straight, ventral margin rather straight.

NORMAND. Note Cycl. Nord. p. 3, 1854.

Hab. Europe.

Species 10. (Mus. Brit.)

SPLÆRIUM CALCULATUM. *Sph. testâ subquadrata, complanata, compressâ, inequilaterali; latere antico breviori, obliquè subtruncato, margine dorsali recto, brevi; latere postico expanso; obliquè quadrato, margine dorsali recto, paulo elevato; umbonibus acutis, tuberculo calyceformi desinenti.*

THE CALYPT SPLÆRIUM. Shell rather square, flattened, compressed, inequilateral; anterior side shorter, obliquely subtruncated, dorsal margin straight, short; posterior side expanded, obliquely square, dorsal margin straight, a little raised; umboes sharp, ending in a little cup-shaped tubercle.

DEAPARNAUD. Moll. Pl. X. f. 14, 15.

Hab. Europe.

Quite distinct from *Cyclas lacustris* of the same author.



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SPHÆRIUM.

PLATE II.

Species 11. (Mus. Brit.)

SPHERIUM NUCLEUS. *Sph. testā tumidi, albi, pallidā, cornuā, fasciis griseis ornata, subrhomboidē; sub-aequilaterā; umbonibus unguis, obtusis, margine dorsali utriusque reticulato, margine ventrali reticulato, marginibus lateralibus subtruncatis.*

THE NUT-LIKE SPHERIUM. Shell tumid, high, pale, horny, ornamented with grey bands, subrhomboidal, nearly equilateral; umboes large, obtuse; dorsal margin rather straight on each side, ventral margin rather straight, lateral margins a little truncated.

STÜDER. Jay's Catalogue.

Hab. Moravia.

Species 12. (Mus. Brit.)

SPHERIUM FISIDIOIDE. *Cyr. testā viridi, subdistanter sulcata, obliquā, tumidi, latiori quam albi; latere postico obliquē producto, margine dorsali declivi; latere antico breviori, margine dorsali declivi; umbonibus elevatis, tumidis, rotundis.*

THE FISIDIUM-SHAPED SPHERIUM. Shell green, rather distantly grooved, oblique, tumid, longer than high; posterior side obliquely produced, dorsal margin sloped downwards, anterior side shorter, dorsal margin sloped, umboes elevated, tumid, rounded.

GRAY. MS. Brit. Mus.

Hab. Europe.

Species 13. (Mus. Brit.)

SPHERIUM STRIATUM. *Sph. testā subrhomboidē, subdistanter sulcatā, obliquā; latere antico brevi, liris validis; latere postico-obliquē producto, ad marginem ventralem obtusē angulato, liris subevanidis; margine dorsali declivi, margine postico-laterali obliquē truncato.*

THE LITTLE STRIATED SPHERIUM. Shell rather rhomboidal, rather distantly sulcated, oblique; anterior side short, ridges strong; posterior side obliquely produced, obtusely angular at the ventral

margin, ridges almost disappearing; dorsal margin sloped, postero-lateral margin obliquely truncated.

LAMARCK. Anim. s. Vert. Cycas, Sp. 10.

Hab. South America.

Species 14. (Mus. Brit.)

SPHERIUM TUMIDUM. *Sph. testā subrotundā, tumidi, rotundē et distanter laticā, fusco-cornuā, albi, latere subantrōiti; latere antico rotundo, latere postico subobliquē producto, prope marginem ventralem subevanidato.*

THE TUMID SPHERIUM. Shell rather round, tumid, strongly and distantly ridged, horny-brown, high, rather orange within; anterior side round, posterior side rather obliquely produced, acuminate near the posterior margin.

BAIRD. Proc. Zool. Soc. 1863. p. 69.

Hab. Vancouver's Island.

Species 15. (Fig. a, b, Pl. IV.)

SPHERIUM PARTURIUM. *Sph. testā pallidā, flavidā, et griseo-cornuā, subrotundā, tumidi, albi, levigatā; latere antico brevi, rotundo; latere postico subproducto, subquadrato.*

THE PRODUCTIVE SPHERIUM. Shell pale yellowish, horny-grey, rather rounded, tumid, high, smooth; anterior side short, round; posterior side a little produced, rather square.

SAY. Gould. Invertebrata, p. 75. f. 55.

Hab. Ohio.

Species 16. (Mus. Brit.)

SPHERIUM RUGOSUM. *Sph. testā solidiusculā, subrhomboidē, subviridi-fusca, medio sulcatā, ad latera levigatā; latere antico brevi, ad marginem dorsalem subevanato, latere truncato; latere postico producto, obliquē truncato.*

THE RUGOSE SPHERIUM. Shell rather solid, subrhomboidal, greenish-brown, sulcated in the

SPHERIUM.—PLATE II.

middle, smooth at the sides; anterior side short, a little cornered at the dorsal margin, truncated at the side; posterior side produced, obliquely truncated.

WHITMORE. MS. Mns. Brit.

Hab. ———?

Species 17. (Fig. a, b, c, and d, Pl. V. Mus. Brit.)

SPHERIUM CORNEUM. *Sph. testā breviter ovatā, tumidā, subtruncatā, fuscā vel flavidā, griseo-fasciatā, vel albidā; umbonibus obtusis, margine dorsali utrinque declivi; marginibus lateralibus obtusissimè truncatis.*

THE HORNY SPHERIUM. Shell shortly ovate, tumid, rather round, brown or yellow, or banded with grey or whitish; umbones obtuse, dorsal margin sloped on both sides; lateral margins very obtusely truncated.

LINNEÆUS (*Tellina cornea*). Syst. Nat.

Cyclas ricalis. Draparnaud.

Hab. Great Britain, Europe generally.

Species 18. (Mus. Brit.)

SPHERIUM TERVERIANUM. *Sph. testā subglobosā, albi, ad apicem corneā, ferè omnino castaneā; latere antico ante umbones excavato; umbonibus prominentibus, latere postico inflato, margine dorsali declivi.*

TERVER'S SPHERIUM. Shell rather globose, high, horny at the apex, chestnut nearly all over, anterior side excavated in front of the umbones; umbones prominent, posterior side inflated, dorsal margin sloped.

DUFUY. Extr. Gall. Test. 87, 1849.

Hab. France.

Species 19. (Mus. Brit.)

SPHERIUM CONSOBRINUM. *Sph. testā compressā, subquadratā, lævigatā, corneā; latere antico brevi, depresso; latere postico subexpanso; margine dorsali elevato, marginibus lateralibus ventralique rectiusculis; umbonibus parvis, acutis.*

THE RELATED SPHERIUM. Shell compressed, subquadrate, smooth, horny; anterior side short, depressed; posterior side rather expanded; dorsal margin raised, lateral and ventral margins rather straight; umbones small, sharp.

CAILLAUD. Voyage de la Méroë.

Hab. Pyrmont.

A smaller species than *Sph. calyculatum*, resembling it, but without the calyx-shaped tubercle.

Species 20. (Mus. Brit.)

SPHERIUM OCCIDENTALE. *Sph. testā subcompressā, ovato-subquadratā, corneo-flavescenti, lævigatā; lateribus subtruncatis, margine dorsali antico declivi, postico paulo elevato.*

THE WESTERN SPHERIUM. Shell rather compressed, ovato-subquadrate, yellowish, horny, smooth; sides a little truncated, anterior dorsal margin sloped downwards, posterior a little raised.

PRIME. MS. Mns. Brit.

Hab. Montreal.



SPHERIUM.

PLATE III.

Species 21. (Mus. Brit.)

SPHERIUM MACULATUM. *Sph. testā parvā, altā, compressā, subquadratā, tenui, coracē, maculis nigris variegatā; latere antico brevi, ante umbones paulo excavato; latere postico magis expanso, subquadrato, margine dorsali rectiusculo, margine laterali latē truncato.*

THE SPOTTED SPHERIUM. Shell small, high, compressed, rather square, thin, horny, variegated with blackish spots; anterior side short, a little excavated in front of the umbones; posterior side more expanded, rather square, dorsal margin rather straight, lateral margin broadly truncated.

MORELET. Test. Nov. p. 25, 1851.

Hab. Yucatan, Mexico.

Species 22. (Mus. Brit.)

SPHERIUM MADAGASCARIENSE. *Sph. testā ovato-subrhomboidē, ferrugineā, coracē-subcitrīdī, fasciatā, laevīdī, concentricē minutissimē striatā, margine dorsali rectiusculo, marginibus lateralibus subtruncatis; umbonibus obtusis.*

THE MADAGASCAR SPHERIUM. Shell ovate, sub-rhomboid, ferruginous or banded with greenish horn, tumid, concentrically very minutely striated, dorsal margin rather straight, lateral margins rather truncated; umbones obtuse.

TRISTAN (?) MS. Mus. Brit.

Hab. Madagascar.

Species 23. (Mus. Brit.)

SPHERIUM STRAMINEUM. *Sph. testā subrhomboidē, solidā, epidermide fulco-flavidā indutā; medio versus apicem distanter līratā, ad latera et versus marginem ventralem levigatā; umbonibus rotundis prominētibz.*

THE STRAW-COLOURED SPHERIUM. Shell subrhomboid, solid, covered with a fulvous yellowish epidermis; middle, towards the apex, distantly ridged, smooth at the sides and towards the ventral margin; umbones rounded, prominent.

CONRAD. Silliman's Journal, Vol. XXV., p. 342.

Hab. Missouri.

Species 24. (Mus. Brit.)

SPHERIUM ELEGANS. *Sph. testā tenui, altā, compressā, subquadratā, levigatā, pallidē coracē, lineis nigrescentibus et fasciis albis ornatā; umbonibus subcentralibus, margine dorsali utrinque paulo declivi.*

THE ELEGANT SPHERIUM. Shell thin, high, compressed, rather flat, smooth, pale horn, ornamented with dark lines and white bands; umbones nearly central, dorsal margin a little sloped on each side.

ADAMS. Boston Journal of Science, 4, Pl. IV. f. 2.

Hab. Vermont.

Species 25. (Mus. Brit.)

SPHERIUM EBURNEUM. *Sph. testā altā, solidā, ebureā, levigatā, rotundē-subquadratā; latere antico angustiori, breviori, rotundō; latere postico expanso, lato, subquadrato, margine dorsali recto, ad troncū truncato.*

THE IVORY SPHERIUM. Shell high, solid, ivory-white, smooth, roundly subquadrate; anterior side narrower, shorter, rounded; posterior side expanded, broad, rather square, dorsal margin straight, cornered at the end.

ANTHONY (?) MS. Brit. Mus.

Hab. United States.

Species 26. (Mus. Brit.)

SPHERIUM FABALE. *Sph. testā compressā, leviter sulcatā, costatā, epidermide ferrugineā indutā, subrotatā, depressā, valde inequilaterali; latere antico brevi, declivi, subacuminato; latere postico producto, lato, margine dorsali elevato, subacuto, margine ventrali rectiusculo.*

THE BEAN SPHERIUM. Shell compressed, slightly grooved, chestnut, covered with a ferruginous epidermis, rather oval, depressed, very inequilateral; anterior side short, sloped, rather acuminate; posterior side produced, broad, dorsal margin raised, slightly arched; ventral margin rather straight.

PRIME. Proc. Soc. Nat. Hist. Brit. IV. 1851, p. 159.

SPHERIUM.—PLATE III.

Sphaerium castaneum. Prime.
Sphaerium sulcatus. Charpentier.
Hab. United States.

Species 27. (Mus. Brit.)

SPHERIUM SIMILE. *Sph. testâ subovatâ vel subrhomboidâ, cornâ, subaequilaterali, liris validis, versus apicem fortioribus rugatâ; latere antico declivi, infra subacuminato, latere postico obliquè et obtusissimè truncato.*

THE SIMILAR SPHERIUM. Shell subovate or subrhomboidal, horny, nearly equilateral, wrinkled with strong ridges, stronger towards the apex; anterior side sloped, rather acuminate below; posterior side obliquely and very obtusely truncated.

SAY. Nichol's Encycl. Am. Ed. 11.
Hab. North America.
Cyclos Sarragola. Lamarck.

It is not so rhomboidal as *Sphaerium sulcatus*, and the sulci are larger at and towards the apex.

Species 28. (Mus. Brit.)

SPHERIUM TRUNCATUM. *Sph. testâ parvâ, pallidè cornâ, griseâ, compressâ, subobliquâ; latere antico brevi, subrotundo; latere postico expanso, obliquè truncato.*

THE TRUNCATED SPHERIUM. Shell small, pale horn, greyish, compressed, rather oblique; anterior

side short, rather round; posterior side expanded, obliquely truncated.

LINSLEY. Amer. Journ. Sci. N. Ser. VI. p. 234.
Hab. United States.

Species 29. (Mus. Brit.)

SPHERIUM INCURVUM. *Sph. testâ parvâ, oblongâ, compressâ, subferrugineâ; latere antico brevissimo, depresso; latere postico producto, truncato; umbonibus acuminatis, incurvis.*

THE INCURVED SPHERIUM. Shell small, oblong, compressed, rather ferruginous; anterior side very short, depressed; posterior side produced, truncated; umboes acuminate, turned inwards.

GUPPY. Proc. Sci. Asso. Trinidad. 1872.
Hab. Isl. Trinidad.

Species 30. (Mus. Brit.)

SPHERIUM ELEVATUM. *Sph. testâ rotundâ, altâ, pallidissimè aurantio-cornâ; latere antico brevi, rotundo; latere postico subexpanso, ad marginem dorsalem emicato; umbonibus rotundis, prominentibus.*

THE RAISED SPHERIUM. Shell rounded, high, very pale, orange-tinted, horny; anterior side short, round; posterior side a little expanded, cornered at the dorsal margin; umboes round, prominent.

HALDEMAN. Proc. Ac. Nat. Hist. Phil. I p. 53.
Hab. America.



SPHERIUM.

PLATE IV.

Species 31. (Mus. Sowerby.)

SPHERIUM CAROLINENSIS. *Sph. testâ subcompressâ, altâ, rotundo-subquadratâ, fusco-cornâ; latere antico subrotundo, angustâ; latere postico obliquè obtusissimè truncatâ; marginè ventrali paulò convexo; umbonibus parvis, haud prominentibus.*

THE CAROLINA SPHERIUM. Shell rather compressed, high, subquadrate, brown-horny; anterior side rather round, narrow; posterior side obliquely very obtusely truncated; ventral margin a little convex; umbones small, not prominent.

DESHAYES. Lamarck. N. et. Anim. sans Vert.

Hab. Carolina, United States.

Species 32. (Mus. Brit.)

SPHERIUM RHOMBOIDEUM. *Sph. testâ subovatâ, pallidâ, lævi, altiusculâ; latere antico breviusculo, marginè dorsali depresso, latere postico subexpansâ, subtruncatâ; marginè ventrali rectiusculo; umbonibus prominentibus, acuminatis.*

THE RHOMBOIDAL SPHERIUM. Shell subovate, pale, smooth, rather high; anterior side rather short, dorsal margin depressed, posterior side a little expanded, slightly truncated; ventral margin rather straight; umbones prominent, acuminate.

SAY. Journ. Acad. Nat. Sci. 2. p. 380.

Hab. Vermont.

Species 33. (Mus. Sowb.)

SPHERIUM SECURIS. *Sph. testâ subquadratâ, griseo-cornâ, tumidâ, levigatâ, umbonibus productis, calyculatis; latere antico brevi, rectiusculo; latere postico cuneato, latè truncatâ, marginè ventrali paulò convexo.*

THE HATCHET SPHERIUM. Shell subquadrate, grey-horny, tumid, smooth; umbones produced, calyculated; anterior side short, rather straight; posterior side cornered, broadly truncated, ventral margin a little convex.

PRIME. Proc. Zool. Soc. Nat. Hist. Bost. iv. p. 160. 1851.

Hab. United States.

Species 34. (Mus. Brit.)

SPHERIUM DISTORTUM. *Sph. testâ solidâ, obliquâ, anticè sulcatâ, posticè levigatâ, corneo-subcitrili, latere antico brevi, rotundo, amplo; latere postico obliquè productâ, angustâ, post umbones excavatâ, marginè terminali obliquè truncatâ.*

THE DISTORTED SPHERIUM. Shell solid, oblique, anteriorly grooved, posteriorly smooth, greenish horny, anterior side short, round, full; posterior side obliquely produced, narrow, excavated behind the umbones, terminal margin obliquely truncated.

C. B. ADAMS.

Hab. America.

Species 35. (Mus. Brit.)

SPHERIUM CREPLINI. *Sph. testâ subgloboâ, subrotundâ, lineis nigrescentibus et fasciis albidis concentricè cinctâ; latere postico brevi, ad marginem dorsalem cuneato; latere antico obliquè productâ, rotundo, ante umbones excavatâ.*

CREPLIN'S SPHERIUM. Shell rather globose, rather rounded, concentrically belted with dark lines and whitish bands; posterior side short, cornered at the dorsal margin; anterior side obliquely produced, round, excavated in front of the umbones.

DUNKER. Zeit. für Malak. 20. 1845.

Hab. Europe.

This little rounded shell has a peculiar bend forward in the anterior side, with a hollow under the umbones.

Species 36. (Mus. Brit.)

SPHERIUM SOLIDUM. *Sph. testâ subquadratâ, solidâ, tumidâ, cornâ, griseo-fuscatâ, regulariter sulcatâ; umbonibus productis, subcentralibus, marginè dorsali utrinque paulò declivi; lateribus obtusissimè subtruncatis, marginè ventrali rectiusculo.*

THE SOLID SPHERIUM. Shell subquadrate, solid, tumid,

SPHÆRIUM.—PLATE IV.

horny, banded with grey, regularly grooved; umboes produced, nearly central, dorsal margin slightly sloped on both sides; sides very obtusely truncated, ventral margin rather straight.

NORMAND. Nat. Cycl. Valenc. 6, f. 34.

Hab. France.

Species 37. (Mus. Brit.)

SPHÆRIUM NOVE-ZELANDIE. *Sph. testā parvā, semipellucidā, compressā, cornuā, griseo-fuscatā, levi, subquadratā, anticē rotundā, posticē obtusē truncatā, umbonibus subcentralibus.*

THE NEW ZEALAND SPHÆRIUM. Shell small, semipellucid, compressed, horny, banded with grey, smooth, rather square, anteriorly rounded, posteriorly obtusely truncated; umboes nearly central.

DESHAYES. Proc. Zool. Soc. 1854, p. 342.

Hab. New Zealand and New Holland.

Species 38. (Mus. Brit.)

SPHÆRIUM SUBTRANSVERSUM. *Sph. testā hyalinā, compressā, pallidē stramineā, versus apicem cornuā; latere antico subacuminato; latere postico lato, subexpansō; margine dorsali recto, margine laterali obliquē truncato.*

THE SUBTRANSVERSE SPHÆRIUM. Shell hyaline, compressed, pale straw, fleshy towards the apex; anterior side rather acuminate; posterior side broad, slightly expanded; dorsal margin straight, lateral margin obliquely truncated.

PRIME. Proc. Zool. Soc. 1860, 322.

Hab. Mexico.

Species 39. (Mus. Brit.)

SPHÆRIUM SOLIDULUM. *Sph. testā ovato-subtrigonā, solidā, rugatā, rugis versus apicem magis distantibus; latere antico breviusculo, declivi; latere postico obliquē truncato, prope marginem ventralem producto, subacuminato, margine dorsali declivi.*

THE SOLID SMALL SPHÆRIUM. Shell ovate-subtrigonal, solid, wrinkled, wrinkles more distant towards the apex; anterior side rather short, sloped, posterior side obliquely truncated, produced near the ventral margin, slightly acuminate, dorsal margin sloped.

PRIME. Proc. Soc. Nat. Hist. Bost. iv. 158, 1852.

Hab. North America.

Species 40. (Mus. Brit.)

SPHÆRIUM PUNCTIFERUM. *Sph. testā parvā, compressā, obliquē subrotundā, semipellucidā, pallidissimā, umbonibus anticē inclinatīs, acutīs; margine dorsali utrinque recto; margine postico-ventrali subproducto.*

THE PUNCTURED SPHÆRIUM. Shell small, compressed, a little obliquely rounded, semipellucid, very pale, umboes leaning anteriorly, sharp, dorsal margin straight on each side; postero-ventral margin slightly produced.

GUPPY — ? MS. Mus. Brit.

Hab. Trinidad.





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SPHERIUM

PLATE V.

Plate V. (Mus. Brit.)

Fig. 17 *d* Sphærium corneum, var. *glaucescens*, Macgillivray v. Pl. II.

Fig. 5 *h*. Sphærium lacustre. See Plate I.

Species 41. (Mus. Brit.)

SPHERIUM INCONSPICUUM. *Sph. testâ scarificatâ, flavido-carnâ, superâ succinâ, levigatâ, obliquâ, inequilaterâlî; latere antico brevî, obliquè truncatâ; latere postico subexpansâ, marginæ posticæ centrâlî obliquè productæ, marginæ dorsâlî elevatæ; marginæ ventrâlî rectiusculâ, lato; umbonibus productis, subacuminatis.*

THE INCONSPICUOUS SPHERIUM. Shell hatchet-shaped, yellowish-flesh, amber above, smooth, oblique, inequilateral; anterior side short, obliquely truncated; posterior side a little expanded; postero-ventral margin obliquely produced, dorsal margin raised; ventral margin rather straight, broad; umbones produced, a little acuminate.

PRIME. Proc. Zool. Soc. Bost.

Hab. Asia Minor.

Species 42. (Mus. Brit.)

SPHERIUM BORNEENSE. *Sph. testâ oblongâ, ferruginâ, tenuiter striatâ, fusco-obscuro angulatim maculatâ; latere antico subrotundâ; latere postico obliquo, subquadrato, marginæ centrâlî rectiusculâ; marginæ dorsâlî utrinque paulo declivî.*

THE BORNEAN SPHERIUM. Shell oblong, ferruginous, finely striated, angularly spotted with dull brown; anterior side rather round; posterior side oblique, rather square, ventral margin rather straight, dorsal margin on each side a little sloped.

OWERBY.

Hab. Borneo.

Species 43. (Mus. Sowerby.)

SPHERIUM ELONGATUM. *Sph. testâ magis, oblongâ, tumidâ, subovatâ, subcylindricâ, cæsius apicem griseo-*

coratâ; umbonibus obtusis, depressis, subcentrâlîbus; latere antico breviusculâ; latere postico paulo magis obliquè productâ, marginæ laterâlî obliquè subtruncatâ; marginæ centrâlî rectiusculâ, elongatâ; marginæ dorsâlî utrinque rectâ, brevî.

THE ELONGATED SPHERIUM. Shell large, oblong, tumid, subovate, greenish, horny grey towards the apex; umbones obtuse, depressed, nearly central; anterior side rather short; posterior side a little more obliquely produced, lateral margin obliquely slightly truncated; ventral margin rather straight, elongated; dorsal margin on each side straight, short.

OWERBY.

Hab. — ?

We have no information respecting the locality of this rather handsome species, of which the three fine specimens in our possession are the only ones we have seen.

Species 44. (*f, a, h*, Mus. Brit.)

SPHERIUM MORMONICUM. *Sph. testâ solidâ, subquadratâ, fere levigatâ, altâ, subequilateralî, coratâ, fusco-fasciatâ et lineatâ; intus coratâ, fasciatâ; lateribus obtusissimè truncatis; umbonibus rotundis obtusis; marginæ dorsâlî utrinque brevî, rîs declivî.*

THE MORMON'S SPHERIUM. Shell solid, rather square, nearly smooth, high, subequilateral, horny, banded and lineated with brown; bluish within, banded; sides very obtusely truncated; umbones rounded, obtuse, dorsal margin short on each side, scarcely sloped.

OWERBY.

Hab. Great Salt Lake.

Broader and more solid than the European *Sph. rivularis*.

Species 45. (Fig. *a, b*, Mus. Brit.)

SPHERIUM CAIENSE. *Sph. testâ subquadratim oratâ, tumidâ, ferruginâ, intus subrimâ, fasciatâ; umbonibus rotundis; latere antico brevî, depressâ.*

rotundo; latere postico obscure angulato, obtusissimè subquadrato.

THE VINOUS SPHÆRIUM. Shell subquadrately ovate, tumid, ferruginous, a little wine-coloured, banded; umboes rounded; anterior side short, depressed, rounded; posterior side obtusely angular, very obtusely quadrate.

SOWERBY

Hab. S. Africa.

Sphærium Capense of KRAUSS is a more shortly ovate and more compressed lenticular shell than this.

Species 46. (Mus. Brit.)

SPHÆRIUM TRANSLUCIDUM. *Sph. testâ parvâ, translucidâ, subcompressâ, oblongâ, anticè subacuminatâ, posticè expansâ, latè subtruncatâ, margine ventrali convexo, lato, margine dorsali breviusculo, recto; umbonibus acutis.*

THE TRANSLUCID SPHÆRIUM. Shell small, translucent, rather compressed, oblong, anteriorly slightly acuminate, posteriorly expanded, broadly sub-

truncated, ventral margin convex, broad; dorsal margin rather short, straight; umboes sharp.

SOWERBY.

Hab. Palm-tree Creek, Australia.

Species 47. (Mus. — ? Copied.)

SPHÆRIUM FERRUGINEUM. *Sph. testâ parvâ, tenui, fuscâ, obliquâ, levi, valdè inequilaterali; latere antico brevissimo, angustò, subacuminatò, margine ventrali acclivo; latere postico expanso, oblongo, margine dorsali convexiusculo; margine postico-laterali obliquè subtruncato.*

THE FERRUGINOUS SPHÆRIUM. Shell small, thin, brown, oblique, smooth, very inequilateral; anterior side very short, narrow, subacuminate, ventral margin sloped upwards; posterior side expanded, oblong, dorsal margin rather convex, postero-lateral margin obliquely subtruncated.

KRAUSS. Sudafrikanischen Mollusken.

Hab. River Kyusa, S. Africa.

Resembling *Sph. incanum*.

SPHERIUM.

		Stems.		Plate.
Borneense, <i>Sowerby</i>	V	42	orale, <i>Ferrussae</i>	I
calyculatum, <i>Drapaerand</i>	I	10	<i>pedicellata</i> , <i>Gray</i>	I
Capense, <i>Kewss</i>	V	45	partumicum, <i>Gould</i>	II
Carolinensis, <i>Deshayes</i>	IV	31	<i>Pisidioides</i> , <i>Gray</i> ..	II
Prime	III	26	panetiferum, <i>Guppy</i>	IV
consobrinum, <i>Cailland</i>	II	19	rhomboidum, <i>Say</i> ..	IV
cornutum, <i>Lamarck</i>	II V	17	rivalis, <i>Diap</i>	I
creplini, <i>Danker</i>	IV	35	rivicolum, <i>Lamarck</i>	I
distortum, <i>C. B. Adams</i>	IV	34	rugosum, <i>Whitmore</i> ..	II
eburneum, <i>Anthony</i>	III	25	scaldianum, <i>Normand</i>	I
elegans, <i>Adams</i>	III	24	securis, <i>Prime</i> ...	IV
elevatum, <i>Haldeman</i>	III	39	simplex, <i>Say</i> ..	III
elongatum, <i>Sowerby</i> ..	V	43	solidum, <i>Normand</i>	IV
fabale, <i>Prime</i>	III	26	solidulum, <i>Prime</i>	IV
ferrugineum, <i>Kewss</i>	V	47	Steinbuchi, <i>Moller</i>	I
inconspicuum, <i>Prime</i> ..	V	41	stramineum, <i>Cailland</i>	III
incurvum, <i>Guppy</i>	III	29	striatum, <i>Lamarck</i>	II
Indicum, <i>Deshayes</i> ...	I	8	subtransversum, <i>Prime</i> ...	IV
laeustre, <i>Drapaerand</i>	I V	5	sulentum, <i>Lamarck</i>	I
lenticularis, <i>Sowerby</i>	I	6	sulculosum, <i>Charpentier</i>	III
maculatum, <i>Morchet</i>	III	21	<i>Terrestrialum</i> , <i>Dupuy</i>	II
Madagascariense, <i>Tristan L.</i>	III	22	translucidum, <i>Sowerby</i>	V
Mormonicum, <i>Sowerby</i>	V	41	transversum, <i>Say</i>	I
Novaezealandica, <i>Deshayes</i>	IV	37	truncatum, <i>Tinsley</i>	III
nucens, <i>Stübel</i>	II	11	tumidum, <i>Baird</i> ...	II
occidentale, <i>Prime</i> ...	II	20		

MONOGRAPH
OF THE GENUS
PLANORBIS.

Lord, Thy glory fills the heavens,
Earth is with its fulness stor'd :
Unto Thee be glory given,
Holy, holy, holy, Lord ! — *Bishop Mant.*



PLANORBIS.

PLATE I.

Genus *PLANORBIS*. *Quoyard*.

Mollusum aquaticum.

Testa interduum sinistralis, spiralis, discoidem, spirā depressā, anfractibus tribus ad septenos; aperturā semilunari, vel ovata vel trigonā, margine plerūmq; tenui.

MOLLUSC, FRESHWATER. Shell spiral, sometimes sinistral, spire depressed, whorls three to seven; aperture semilunar, or ovate or trigonal, margin generally thin.

Synonyms. *Corvus*, Adams. *Orbis*, Schroet.
Inclasis. *Planorbula*, Hald. *Seguentina*.

The late Mr. G. B. Sowerby, in his *Genera of Shells*, expresses his conviction that the *Planorbes* are sinistral shells, because when the shell is so placed that the aperture is on the left side, the whole of the whorls of what seems to be the spire are visible, while what is then the lower disc is hollow, and the apical whorls are more or less engulfed. This, however, is not the case throughout the genus, but chiefly among the typical forms. The Messrs. Adams describe the genus as consisting of dextral shells. My impression is that some are sinistral and others dextral. My attention had not been drawn to the subject before several plates had been drawn, and some of the figures being placed as if dextral will seem to have an upside-down appearance. The genus is widely diffused throughout all parts of the globe. Wherever there are ditches, ponds, wells, and rivers, there the *Planorbes* appear.

Species 1. (Fig. a, b, Mus. Sowerby.)

PLANORBIS CORNEUS. *Pla. testā tumidā, latā, sinistrali, corneā, levigatā, medio anfractu castaneā; spirā emicantēsculā, anfractibus senis, convexiorculis, rapidē crescentibus, prope suturam rotundis; tum declivibus, infus ventricosā; disco inferiori concavā, anfractibus rotundis, apicalibus oblectis, aperturā latā, altā, subquadrātā.*

THE HORNY PLANORBIS. Shell tumid, broad, sinistral, horny, smooth, chestnut in the middle of the whorls; spire rather concave; whorls six, rather convex, rapidly increased, rounded near the suture, then sloped, ventricose below; lower

disc concave, whorls rounded, apical hidden; aperture broad, high, subquadrate.

LINNEUS. *Systema Nature*.

Hab. Great Britain.

The specimen represented by figure b belongs to a recently discovered albino variety.

Species 2. (Mus. Brit.)

PLANORBIS TRIVOLVIS. *Pla. testā tumidā, altā, pallidā, fuscā, obliquē rugatā, sinistrali; spirā excavatā, angustā, suprà suturam elevatā, angulatā; anfractibus quaternis superiō, tribus inferiō apparentibus; aperturā subtrigonā, altā, intus castaneo-marginatā.*

THE THREE-WHORLED PLANORBIS. Shell tumid, high, pale brown, obliquely wrinkled, sinistral; spire hollowed, narrow, raised above the suture, angular; whorls, four appearing above, three below; aperture subtrigonal, high, bordered inside with chestnut.

SAY. *American Conchology*, 1860.

Hab. New York.

Species 3. (Mus. Sowerby.)

PLANORBIS PERUVIANUS. *Pla. testā albidā, semipellucidā, altiusculā, sinistrali, spirā angustā, anfractibus quaternis, angustā, suprà suturam elevatā, ultimo magno, subdeclivi; versu aperturam calidē expansā; suturā profundā; aperturā subtrigonā, supra infraque anfractum ultimam productā, disco inferiori excavatā, anfractibus rotundis, apicali oblecto.*

THE PERUVIAN PLANORBIS. Shell whitish, semipellucid, rather high, sinistral, spire narrow, whorls four, narrow, raised above the suture; last large, somewhat sloped, much expanded towards the aperture; suture deep; aperture subtrigonal, produced above and below the last whorl; lower disc hollow, whorls rounded, the apical one hidden.

BRODERIP. *Proc. Zool. Soc.* 1842, f. 125.

Hab. Peru.

PLANORBIS.—PLATE I.

Species 4. (And Fig. b, Pl. X., Mus. Sowerby.)

PLANORBIS CORPULENTUS. *Pla. testâ tenui, inflatâ, subglobosâ, subviridâ cornâ, concentricè obliquè rugatâ, altâ, superne angulatâ, infrâ subangulatâ, sinistrali; spirâ infundibulatâ, anfractibus supra suturam elevatis, angulatis, lateraliter planulatis; medio altis, convexis; ultimo versus aperturam expansis; aperturâ maximâ, supra infraque ultimam anfractuum productis, superne subangulatâ, infernè latâ, margine expanso, intus castaneo; disco superiori profundè umbilicato.*

THE CORPULENT PLANORBIS. Shell thin, inflated, subglobose, greenish horny, concentrically obliquely wrinkled, high, angular above, a little angular below, sinistral; spire funnelled, whorls raised above the suture, angular, laterally flattened, high, convex in the middle; last expanded towards the aperture; aperture very large, produced above and below the last whorl, rather narrow above, broad below, margin expanded, chestnut within; upper disc deeply umbilicated.

SAY. Albers. Mon. Pl. III. f. 79.

Hab. Winnipeg River.

It is difficult to distinguish the less developed forms of this species from the more elevated forms of *Planorbis lentus*. The latter is a stouter shell, with the wrinkles more defined, and it is never quite so high. *Planorbis trivoleis* is considerably more depressed than this.

Species 5. (Mus. Sowerby, &c.)

PLANORBIS COMPLANATUS. *Pla. testâ dextrali corvofulvâ, levigatâ, compressâ, superne convexiusculâ, infernè planulatâ; spirâ medio subcavatâ; anfractibus quintis, moderatè crescentibus, ultimo infrâ carinatis; aperturâ obliquè subovatâ, supra anfractum ultimum elevatâ et productâ.*

THE FLATTENED PLANORBIS. Shell horny fulvous, smooth, compressed, rather convex above, flattened below; spire a little hollowed in the middle; whorls five, increasing moderately, last

keeled below; aperture obliquely subovate, raised and produced above the last whorl.

LINNÆUS. *Systema Naturæ.*

Planorbis marginatus. Draparnaud.

Planorbis umbilicatus. Müller.

Hab. France, England, Sicily.

Species 6. (Fig. a, b, Mus. Brit.)

PLANORBIS OLIVACEUS. *Pla. testâ sinistrali, depressâ, olivaceo-fuscâ, nitenti, latâ, superne declivi, infrâ latissimâ, spirâ concavâ, angulatâ, anfractibus senis, compressis, supra suturam paulo elevatis, tum lentè declivibus; aperturâ subtrigonâ, margine inferiori obliquè productâ; disco inferiori emarginato.*

THE OLIVE PLANORBIS. Shell sinistral, depressed, olive-brown, shining, broad, sloped above, very broad beneath; spire concave, narrow; whorls six, compressed, a little raised above the suture, then gently sloped; aperture subtrigonal, lower margin obliquely produced; lower disc concave.

SPIX. *Testacea Braziliana*, p. 26, Pl. XVIII. f. 1, 2.

Planorbis Cumingianus. Dunker. *Proc. Zool.* 1848.

Hab. Brazil.

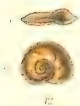
Species 7. (Mus. Brit.)

PLANORBIS BICARINATUS. *Pla. testâ sinistrali, tenui, levigatâ, altissimâ, pallidè stramineâ; spirâ angustâ, propemodè infundibulatâ, anfractibus tribus, superne infernèque carinatis; ultimo anfractu maximo, ad aperturam altissimo, superne acuminato, infrâ latiusculo; disco inferiori profundè umbilicato, anfractu apicali oblecto.*

THE TWO-KEELED PLANORBIS. Shell sinistral, thin, smooth, very high, pale straw; spire narrow, deeply funnelled, whorls three, keeled above and below; last whorl very large, very high at the aperture, acuminated above, rather wide below; lower disc deeply umbilicated, apical whorl hidden.

SAY. *Journ. Nat. Sci. Phil.*

Hab. River Ohio.



II a



III



IV

PLANORBIS.

PLATE II.

Species 8. (Mus. Sowb.)

PLANORBIS NAUTILIENS. *Pla. testâ albidâ, parvâ, subdepressâ, anfractibus quatuor, rapidè crescentibus, lris coracis, ad marginem spinosis aequalis, ultimus disjuncto, disco superiori planulato, anfractibus cotinuatodepressis; disco inferiori latè usque ad apicem umbilicato.*

THE NAUTILOID PLANORBIS. Shell whitish, small, rather depressed, whorls four, quickly enlarging, ridges horny, annulated with horny ridges spinous at the margin, last disjoined, upper disc flattened with round-depressed whorls; lower disc broadly umbilicated as far as the apex.

LINNEUS. *Systema Naturæ.*

Planorbis tuberculatus. Müller.

Planorbis cristatus. Draparnaud.

Hab. France, Great Britain.

Species 9. (Fig. a, b, Mus. Sowb.)

PLANORBIS CONTORTUS. *Pla. testâ fulvâ, medioeriter depressâ, superâ planulatâ, infâ angulatiâ umbilicatâ; anfractibus sex, lentè crescentibus, angustis, superâ cotinuatâ, infâ ad marginem umbilici angulatis, umbilico angustâ, profundiâ; aperturâ scutiformi.*

THE EVEN-WHORLED PLANORBIS. Shell fulvous, moderately depressed, flattened above, angularly umbilicated below; whorls six, slowly increased, narrow, rounded above, angular at the edge of the umbilicus, umbilicus narrow, deep; aperture semi-lunar.

MÜLLER. *Drap. Mol. Pl. I. f. 39-41.*

Planorbis crassus —?

Planorbis umbilicatus —?

Hab. England, France.

Species 10. (Fig. a, b, Mus. Sowb.)

PLANORBIS GLABER. *Pla. testâ subtranslucenti, nitenti, altissimâ, anfractibus tribus, rapidè crescentibus, ultimo lato, superâ subplanulatâ, disco superiori quàm inferior angustiori, disco inferiori plano, tuberculato; aperturâ obliquâ, labio externo convexè obliquo.*

THE SMOOTH PLANORBIS. Shell somewhat orange, shining, rather elevated; whorls three, quickly increasing; the last wide, rather flattened at the top, upper disc a little narrower than lower; lower disc flat, tuberculated; aperture oblique, outer lip convexly oblique.

JEFFREYS —? British Mollusca, &c.

Planorbis levis. Alder.

Hab. Penzance, Falmouth, Swansea, Belfast, &c.

Species 11. (Fig. a, b, Mus. Brit.)

PLANORBIS CAMPANULATUS. *Pla. testâ altâ, tenuissimâ obliquè laticâ; anfractibus sex, rapidè crescentibus, externis magnis; disco superiori profundi excavato, anfractibus internis calatis, externis rotundis, ultimo versus aperturam contracto, tùm expanso; disco inferiori anfractibus prope suturam angulatis; aperturâ subpyriformi, expansâ, superâ elevatâ, intus contractâ.*

THE BELL PLANORBIS. Shell high, finely obliquely ridged; whorls six, rapidly increased, outer one large; upper disc deeply hollow, inner whorls hidden, outer rounded, last contracted towards the aperture, then expanded; lower disc with whorls angular near the suture; aperture rather pyriform, expanded, raised above, contracted within.

SAY. *Journ. Am. Soc. Phil. Vol. II. p. 166.*

Hab. Newport, Iowa, U.S.

Species 12. (Mus. Sowerby.)

PLANORBIS CARINATUS. *Pla. testâ depressâ; anfractibus quaternis, cæcis paulo infra medium acutè carinatis; ultimo lato; disco superiori excavato, anfractibus convexis; disco inferiori magis convexo, anfractibus subplanulatis.*

THE KEELED PLANORBIS. Shell depressed; whorls four, sharply keeled on the outer side a little below the middle; last broad; upper disc hollow, whorls convex; lower disc more convex, with rather flattened whorls.

MÜLLER. *Drap. Mol. Pl. 2. f. 13, 14.*

Helix planorbis. Linnaeus.

Planorbis planatus —?

PLANORBIS.—PLATE II.

Planorbis lutescens. Lamarek.

Hab. Britain and other parts of Europe.

Resembling *Planorbis marginatus*, but with outer whorls wider, and the keel planed more towards the middle of the whorls.

Species 13. (Fig. a, b, Mus. Brit.)

PLANORBIS VORTEX. *Pla. testâ depressâ, utrinque complanatâ; anfractibus octavis, angustissimis, lentè crescentibus; disco superiori subexcavato, inferiori paulò convexo, anfractibus angustè propè suturam elevatis.*

THE VORTEX PLANORBIS. Shell depressed, flattened on both sides; whorls eight, very narrow, slowly increasing; upper disc a little hollow, lower a little convex, with whorls narrowly raised near the suture.

LINNEUS. (*Helix*) *Systema Naturæ*.

Planorbis compressus. Michelet.

Hab. Europe generally.

Species 14. (Fig. a, b, Mus. Sowerby.)

PLANORBIS SPIROBIS. *Pla. testâ compressâ; anfractibus senis, lentè crescentibus, supernè angustioribus; disco superiori angustiori, planulato; disco inferiori concavo; aperturâ supra anfractum ultimum elevatâ; infusâ productâ, rotundâ.*

THE SPIROBIS PLANORBIS. Shell compressed; whorls six, slowly increasing, narrower above; upper disc narrower, flattened; lower disc concave; aperture raised above the last whorl, produced, rounded below.

MÜLLER. *Verm., Test. et Flav.* p. 161. No. 347.

Hab. Britain, France.

Species 15. (Fig. a, b, Mus. Sowerby.)

PLANORBIS NITIDUS. *Pla. testâ compressâ, succinea, medio obtusè angulatâ, suprâ infrâque ferè equaliter concavâ; ultimo anfractu maximo; disco spirali contracto, planato, anfractibus internis angustis; disco inferiori latè excavato.*

THE NEAT PLANORBIS. Shell flattened, amber, obtusely angular in the middle, almost equally convex above and below: last whorl very large; spiral disc contracted, flattened, with narrow inner whorls; lower disc broadly excavated.

MÜLLER. *Drap. Moll.* Pl. 2, f. 20-22.

Hab. Britain, France.

Species 16. (Fig. a, b, Mus. Sowerby.)

PLANORBIS LACUSTRIS. *Pla. testâ compressâ, succinea, internè divisiâ, lineis rubris distantibus, obliquè concentricis extâs notatâ; supernè subconicâ; spirâ minimâ; medio subacutè angulatâ, infusâ angulum planulato, umbilicato.*

THE LAKE PLANORBIS. Shell compressed, amber, internally divided, externally marked by distant obliquely concentric red lines; somewhat conical above; spire very small; middle rather sharply angular, flattened below the angle, umbilicated.

LIGHTFOOT. — ? Brit. Moll.

Seymouria lineata. — ?

Hab. Ponds and ditches in England.





18



19



20a



20b



21



22a



22b



23a



23b



24a



24b



25a



25b



26a



26b

PLANORBIS.

PLATE III.

Species 17. (Mus. Sowerby.)

PLANORBIS ALBUS. *Pla. testâ pallidissimâ, depressâ, spiculatè liris tenuibus hirsutis ornatâ; anfractibus paucis, ultimo maximo; aperturâ obliquè productâ; disco superiori lenticulari, disco inferiori concauo.*

THE WHITE PLANORBIS. Shell very pale, depressed, spirally ornamented with thin hairy ridges; whorls few, last very large; aperture obliquely produced; upper disc lenticular; lower disc concave.

MÜLLER. *Drap. Moll.* Pl. I. fig. 45-48.

Planorbis hispidus. Draparnaud.

Hab. Britain, France.

concave, rather flattened; aperture depressed, obliquely ovate, narrow.

SOWERBY.

Hab. — ?

Two specimens are all I have seen of this pretty little amber-coloured species.

Species 20. (Fig. a, b, c, Mus. Brit.)

PLANORBIS REDFIELDI. *Pla. testâ pallidè fuscâ, altâ; anfractibus paucis, suprâ infraqûe carinatis; disco superiori profundè excavato, ultimo anfractu concauo; disco inferiori profundissimè umbilicato; aperturâ altissimâ, supernè expansâ, auriformi, suprâ infraqûe angulatâ.*

THE EARED PLANORBIS. Shell pale fawnish, high; whorls few, keeled above and below; upper disc deeply excavated, last whorl convex; lower disc very deeply umbilicated; aperture very high, expanded above, auriform, angular above and below.

C. B. ADAMS. *Conch. Contrib.* p. 23.

Hab. Jamaica.

Species 18. (Mus. Sowb.)

PLANORBIS ARMIGERUS. *Pla. testâ subdepressâ, solitiusculâ, pallidè cornèâ; anfractibus quinis, subcompressis, ultimo supernè subcontracto, supra anfractibus spiculis elevato, versus aperturam depresso; disco inferiori profundè umbilicato; aperturâ declivè, intus prope marginem incrassatâ, ovato.*

THE ARMOUR-BEARING PLANORBIS. Shell rather depressed, solid, pale horny; whorls five, rather compressed, last rather contracted above, raised above the spiral whorls, depressed towards the aperture; lower disc deeply umbilicated; aperture sloped, thickened within near the margin, ovate.

SAY. *Haldeman's Monograph*, Pl. IV. f. 11-15.

Hab. New York.

Species 21. (Fig. a, b, Mus. Sowerby.)

PLANORBIS COARCTATUS. *Pla. testâ altâ, pallidè stramineâ; anfractibus quinis, compressis, suprâ infraqûe rotundè angulatis, medio concauis; disco superiori profundè excavato, disco inferiori complanato, anfractibus gradatim crescentibus, ultimo anfractu versus aperturam angustato, aperturâ angustâ, subovatâ, margine paulo expanso, intus concauo.*

THE CONTRACTED PLANORBIS. Shell high, pale straw; whorls five, compressed, roundly angular above; convex in the middle; upper disc deeply excavated; lower disc flattened, whorls gradually increasing, last whorl narrow towards the aperture; aperture narrow, rather oval, margin a little expanded, narrow within.

SOWERBY.

Hab. — ?

Species 19. (Fig. a, b, Mus. Sowerby.)

PLANORBIS SUCCINEUS. *Pla. testâ depressâ, succineâ, politâ; anfractibus quaternis, sublentè crescentibus, apicalibus angustis, externo tumido; disco inferiori intè concauo, subcomplanato; aperturâ depressâ, obliquè ovatâ, angustâ.*

THE AMBER PLANORBIS. Shell depressed, amber, polished, whorls four, rather slowly increasing, apical ones narrow, last tumid; lower disc widely

PLANORBIS.—PLATE III.

Species 22. (Fig. a, b, Mus. Sowerby.)

PLANORBIS ORBICULATUS. *Pla. testâ depressâ, albâ, semipellucidâ; anfractibus quinis, supernè concavo-planulatis, latiusculis, infrâ angustatis; aperturâ obliquè elevatâ, margine inferiori sursùm acclivi.*

THE ORBICULAR PLANORBIS. Shell depressed, white, semipellucid; whorls five, convexly flattened above, rather broad, narrow below; aperture obliquely raised, lower margin sloped upwards.

MORELET — ? Adams.

Hab. — ?

Species 23. (Fig. a, b, Mus. Sowerby.)

PLANORBIS PHILIPPINARUM. *Pla. testâ depressâ, griseâ, subopacâ; anfractibus senis, subcompressis, suprâ infrâque convexiusculis, medio obtusissimè angulatis; disco inferiori planulato; disco superiori magis concavo; aperturâ supernè paulò elevatâ.*

THE PHILIPPINE PLANORBIS. Shell depressed, grey, rather opaque; whorls six, rather compressed, rather convex above and below, very obtusely

angular in the middle; lower disc flattened, upper disc more concave; aperture a little raised above.

DUNKER. C. B. Adams. P. Z. 1848.

Hab. Philippines.

This shell is stouter and deeper than the preceding, and the discs are less flattened.

Species 24. (Mus. Sowerby.)

PLANORBIS LUGUBRIS. *Pla. testâ altiusculâ, tenui, levigatâ, nitenti, castaneâ; anfractibus quinis, supernè rotundis, latiusculis, infrâ magis contractis; disco superiori profundè excavato, disco inferiori subcitrilli, subcontracto.*

THE DARKSOME PLANORBIS. Shell rather deep, thin, smooth, shining, chestnut; whorls five, rather rounded above, rather broad, more contracted below; upper disc deeply excavated; lower disc greenish, rather contracted.

WAGNER. Spix, Testacea Brazilianæ. P. 27. No. 2.

Hab. Brazil.



PLANORBIS.

PLATE IV.

Species 25. (Mus. Sowerby.)

PLANORBIS DIANGULATUS. *Pla. testâ altiusculâ, solidâ, fumoso-fusci, utrinque angulatim latè umbilicatâ dextrali; anfractibus paucis, suprà infraque subcarinatis, aperturâ subtrigoniâ, declivi, infrà acuminatâ labio externo intus incrassato.*

THE TWO-ANGLED PLANORBIS. Shell rather high, solid, smoky-brown, angularly broadly umbilicated on each side; whorls few, keeled above and below; aperture subtrigonal; sloped, acuminate below; outer lip thickened within.

— ? Sowerby.

Hab. Brazil.

The whorls are not flattened at the top, as in *Planorbis bicarinatus*, but the lower funnel-shaped umbilicus is very similar.

Species 26. (Fig. a, b, Mus. Brit.)

PLANORBIS COSTULATUS. *Pla. testâ parâ, compressissimâ, obliquè concentricè costulatâ, corallo-subcicili; anfractibus paucis, rapidè crescentibus, superiòrè lentè convexis, ultimo magno; aperturâ obliquè suboriatâ, disco inferiori subplanulatâ.*

THE RIBBED PLANORBIS. Shell small, very compressed, obliquely concentrically ribbed, greenish blue; whorls few, rapidly increased, slightly convex above, last large; aperture obliquely rather oval; lower disc a little flattened.

KRAUSS. Sudafrikan. Mollusken. Tab. V. f. 8.

Hab. Natal.

Species 27. (Fig. a, b, Mus. — ? Copied.)

PLANORBIS BENGALENSIS. *Pla. testâ compressâ, tenui, pallidè succineâ, levi, superiòrè convexâ, infrà planulatâ, anfractibus tribus, apicalibus paulo depressis; umbilico basali parvo; aperturâ subtrigoniâ.*

THE BENGAL PLANORBIS. Shell compressed, thin, pale amber, smooth, convex above, flattened below, whorls three, apical a little depressed, basal umbilicus small; aperture subtrigonal.

DUNKER. Index Molluscorum. Tab. II. f. 1-4.

Hab. Bengal.

This shell does not appear from Dunker's figure to have the chambered character of the *Segmentina* group, as shown in *Planorbis calathus*, which it somewhat resembles otherwise, although not nearly so tumid.

Species 28. (Mus. Sowerby.)

PLANORBIS AFFINIS. *Pla. testâ cornuâ, tumidâ; spirâ concavâ, anfractibus quinque altiusculis, prope suturam subangulatim elevatis, tum declivibus, infrà rotundatis, apicali obliquo; aperturâ nanusculâ, superiòrè depressâ.*

THE RELATED PLANORBIS. Shell horny, tumid; spire concave, whorls five, rather high, subangularly elevated near the suture, then sloped, rounded beneath, the apical one hidden; aperture rather large, depressed above.

ADAMS, C. B. Conchological Contributions, p. 44.

Hab. Jamaica.

More depressed and slight than *Planorbis cornuus*, with the whorls beneath more deeply sunk in the umbilicus.

Species 29. (Mus. Brit. Sowb.)

PLANORBIS DECLIVIS. *Pla. testâ altâ, angustiusculâ, cornuâ vel subcornuâ, tenuissimè liratâ; spirâ planiusculâ, anfractibus angustis, ultimo magno, superiòrè angustè elevato, tum declivi, infrà rotundo, disco inferiori profundè concavo, anfractibus rotundis; aperturâ magnâ, auriformi, infrà culti expanso, producto.*

THE SLOPED PLANORBIS. Shell raised, rather narrow, horny, or chestnut, very finely ridged; spire rather flat, whorls narrow, last large, narrowly raised above, then sloped, rounded below, lower disc deeply concave, whorls rounded, aperture large, ear-shaped, much expanded and produced below.

SOWERBY.

Hab. — ?

Differing from *Planorbis cornuus* in the narrowness and elevation of the whorls, and in the great expansion and production of the lower part of the mouth.

PLANORBIS.—PLATE IV.

Species 30. (Fig. 1, a, b, Mus. Hanley.)

PLANORBIS CALATHUS. *Pla. testâ parvâ, dextrali, nitenti, succinè, internè segmentatâ, extis fasciis albis obliquè radiantibus ornatâ, superne concavâ, infra planulatâ, spirâ valdè contractâ; anfractibus tribus, ultimo magno, subconico, infra acutè angulato, angustè umbilicato.*

THE BASKET PLANORBIS. Shell small, dextral, shining, amber, divided by segments within, ornamented without by white rayed bands, convex above, flattened below; spire much contracted, whorls three; last large, somewhat conical, acutely angular, narrowly umbilicated.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. V. (1850), p. 349.

Hub. Moradabad, Kattiawar, Ceylon, Cashmere.

Belonging to the 'Segmentina' group.

Species 31. (Mus. Hanley.)

PLANORBIS EXUSTUS. *Pla. testâ subviridi, fusco, tenuiter liratâ, spirâ subplanulatâ, anfractibus tribus, ultimo maximo, aperturâ superne subangulatâ, elevato, tum depresso, declivi, infusè expansâ, subproductâ, disco inferiori latè concavo.*

THE BURNT PLANORBIS. Shell greenish brown, finely ridged; spire rather flattened; whorls three, last large; aperture angularly raised, then depressed, sloped, expanded below, rather produced; lower disc broadly concave.

DESHAYES. Belanger's Voyage. Ind. Ori. Zool. p. 417.

Planorbis Indicus. Benson.

This appears quite distinct from *Planorbis coromandelicus* in form and surface.

Species 32. (Fig. a, b, Mus. — ? Copied.)

PLANORBIS NATALIS. *Pla. compressâ, fumoso-fusâ; spirâ subplanulatâ, anfractibus quaternis, rotundis; ultimo lato, medio prominenti; disco inferiori latè concavo; aperturâ compressâ, lateraliter elongatâ.*

THE NATAL PLANORBIS. Shell smoky brown; spire rather flat, whorls four, rounded; last broad, prominent in the middle; lower disc broadly concave, aperture compressed, laterally elongated.

KRAUSS. Sudafrikanischen Mollusken. Tab. V. f. 9.

Hub. Cape Natal, S. Africa.

Species 33. (Mus. — ? Copied.)

PLANORBIS PFEIFFERI. *Pla. testâ olivaceâ, lavi, subcompressâ; spirâ subcomplanatâ, anfractibus tumidis, rotundis, superne concavâ, infra angustatis; aperturâ rotundè subquadratâ; disco inferiori angustè umbilicato.*

PFEIFFER'S PLANORBIS. Shell olive, smooth, rather compressed; spire rather flattened, whorls tumid, rounded, convex above, narrow below; aperture roundly subquadrate; lower disc narrowly umbilicated.

KRAUSS. Sudafrikanischen Mollusken. Tab. V. f. 33.

Hub. Cape Natal, South Africa.

Species 34. (Mus. Brit.)

PLANORBIS COROMANDELICUS. *Pla. testâ altâ, castaneo-concavâ, tenui, lavigatâ, irregulariter undatâ; spirâ contractâ, concavâ; anfractibus quaternis, supra suturam angulatim elevatis, perpendiculariter subcomplanatis; ultimo magno, ad aperturam expanso; aperturâ supra suturam elevato, tum declivi, infra obliquè expansâ, productâ; disco inferiori concavo, anfractibus rotundis, apicali obtecto.*

THE COROMANDEL PLANORBIS. Shell high, chestnut-horn, smooth, irregularly undated; spire contracted, concave; whorls four, angularly raised above the suture, perpendicularly flattened, last large, expanded towards the aperture; aperture raised above the suture, then sloped, obliquely expanded, produced; lower disc concave, whorls rounded, apical one hidden.

KÜSTER, as of Fabricius.

Hub. Co. of Coromandel.



PLANORBIS.

PLATE V.

Species 35. (Fig. a, b, Mus. Brit.)

PLANORBIS SIBIRICUS. *Pla. testâ parvâ, tumidâ, dextrâ, rubescenti-cornâ; spirâ planulatâ, anfractibus tribus ad quatuor, tumidis, subrotundis; disco inferiori valdè concavo, anfractu apicali profundè oblecto; aperturâ obliquè subovatâ.*

THE SIBERIAN PLANORBIS. Shell small, tumid, dextral, reddish horn; spire flattened, whorls three to four, tumid, rather round; lower disc very concave, apical whorl deeply hidden; aperture obliquely subovate.

DUNKER. Proc. Zool. Soc. 1848, p. 12.

Hab. Siberia.

Species 36. (Fig. a, b, Mus. Brit.)

PLANORBIS STELZNERI. *Pla. testâ dextrâ, pallidissimè fulvâ, solidâ, compressâ, disco superiori complanato, inferiori ad marginem convexo, bim angulato, planulato, medio latè umbilicato; anfractibus quinque, superè convexiusculis, supra medium subangulatis, bim versus columellam inclinatâ; aperturâ obliquè subovatâ.*

STELZNER'S PLANORBIS. Shell dextral, very pale fulvous, solid, compressed; upper disc flattened, lower convex at the margin, then angular, flattened, broadly umbilicated in the middle; whorls five, rather convex above, subangular above the middle, then sloped inwards towards the columella; aperture obliquely subovate.

DOHRN. Proc. Zool. Soc. 1858.

Hab. Ceylon.

Species 37. (Fig. a, b, Mus. Brit.)

PLANORBIS GILBERTI. *Pla. testâ subcompressâ, dextrâ, tenui, ferè albâ; spirâ parvâ; anfractibus tribus; ultimo magno, tumido, superè subconico, infra medium obtusè angulato; disco inferiori planulato, umbilicato; aperturâ angustâ, infra medium angulatâ.*

GILBERT'S PLANORBIS. Shell subcompressed, dextral, thin, almost white; spire small; whorls three,

last large, tumid, rather conical above, obtusely angular below the middle; lower disc flattened, umbilicated; aperture narrow, angular below the middle.

DUNKER. Proc. Zool. Soc. 1848, 40.

Hab. East Australia.

Species 38. (Fig. a, b, c, Mus. Brit.)

PLANORBIS EBERNEUS. *Pla. testâ altâ, tumidâ, undulatâ, levi, albâ, medio anfractuum castaneâ fasciatâ; apice parvo, anfractibus tribus, superè subplanulatis, tum declivibus, infra inflatis, ultimo magno, alto, rapidè crescenti; disco inferiori convexo, anfractu apicali oblecto; aperturâ magnâ, superè flexuosim depressâ, infra inflatâ, productâ.*

THE IVORY PLANORBIS. Shell high, tumid, undulating, smooth, white, banded with chestnut in the middle of the whorls; apex small, whorls three, rather flattened above, then sloped, inflated below; last large, high, rapidly increased; lower disc convex, apical whorl hidden; aperture large, flexuously depressed above, inflated below, produced.

GRAY — ? MS. Mus. Brit.

Hab. Ceylon.

Species 39. (Fig. a, b, Mus. Brit.)

PLANORBIS OBTUSUS. *Pla. testâ compressâ, subrugosâ, ferruginâ, apice lato, planulato; anfractibus quinque, lentè crescentibus, convexiusculis, superè subdeclivibus, infra obtusè angulatis, infra angulum planulatis; aperturâ obliquè subovatâ, infra obtusè angulatâ.*

THE OBTUSE PLANORBIS. Shell compressed, rather rough, ferruginous, apex broad, flattened; whorls five, slowly increased, rather convex; rather sloped above, obtusely angular below, flattened below the angle; aperture obliquely subovate, obtusely angular below.

DESHAYES. Proc. Zool. Soc.

Hab. Adekide.

PLANORBIS.—PLATE V.

Species 40. (Fig. a, b, Mus. Brit.)

PLANORBIS BRUNNEUS. *Pla. testâ subglobosâ, altâ, levî, ferrugineâ, spirâ parvâ, anfractibus tribus, supernè contractis, suprà suturam, elevatis, subangulatis, tum rotundis, medio inflatis; disco inferiori angustè umbilicato, aperturâ semilunari, infrà productâ, expansâ.*

THE BROWN PLANORBIS. Shell subglobose, high, smooth, ferruginous, spire small, whorls contracted above, raised, a little angular above the suture, then rounded, inflated in the middle; lower disc narrowly umbilicated; aperture semilunar, produced and expanded below.

GEAT. Adams. Genera.

Hab. Bombay.

Species 41. (Fig. a, b, Mus. Brit.)

PLANORBIS MACNABIANUS. *Pla. testâ tenuissimâ, pellucidâ, succineâ, utrinque planulatâ, compressissimâ; anfractibus septenis, lentissimè crescentibus, aperturâ subrhomboideâ; infrà angulatâ.*

MACNAB'S PLANORBIS. Shell very thin, pellucid, amber, flattened on both sides, very compressed; whorls seven, very slowly increased; aperture subrhomboidal, angular below.

ADAMS, C. B. Conchological Contributions, p. 42.

Hab. Jamaica.

Species 42. (Mus. Brit.)

PLANORBIS TENIATUS. *Pla. compressâ, dextrâ, pallidè cornèâ; spirâ parvâ, anfractibus quaternis vel quinis, internis tribus angustissimis, ultimo tumido, latiusculo, utrinque rotundato; medio fasciato, aperturâ obliquè oblongâ.*

THE RIBBED PLANORBIS. Shell compressed, dextral, pale horny; spire small, whorls four or five, inner three very narrow; last tumid, rather broad, rounded on both sides, banded in the middle, aperture obliquely oblong.

MORELET. Adams. Genera.

Hab. Isle of Pines.

Species 43. (Fig. a, b, Mus. Brit.)

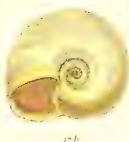
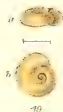
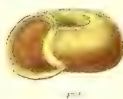
PLANORBIS STAGNICOLA. *Pla. testâ dextrali, complanatâ, olivaceâ, minutissimè lirâtâ, supernè convexiusculâ, anfractibus tribus, rapidè crescentibus, ultimo lato; aperturâ obliquè subovatâ; disco inferiori concavo, anfractibus conspicuis, planulatis.*

THE STILL-WATER PLANORBIS. Shell dextral, flattened, olive, very finely ridged; rather convex above; whorls three, quickly increasing, last broad; aperture obliquely subovate; lower disc concave, whorls conspicuous, flattened.

MORELET. —? Adams. Gen. of Shells.

Hab. —?

Very like *Planorbis albus* in form, but of a dark green colour, and finely wrinkled.



PLANORBIS.

PLATE VI.

Species 44. (Fig. a, b, Mus. Brit.)

PLANORBIS HINDSIANUS. *Pla. testâ parvâ, dextrali, compressâ, pallidâ succinâ, supernè convexâ, infra concavâ, lavi; spirâ parvâ, anfractibus tribus, duobus apicalibus angustis, ultimo lato, rapidè crescenti; aperturâ latâ, perobliquâ.*

HINDS' PLANORBIS. Shell small, dextral, compressed, pale amber, convex above, concave below, smooth, spire small, whorls three, two apical narrow, last broad, rapidly enlarged; aperture broad, very oblique.

DUNKER. Proc. Zool. Soc. 1848, p. 41.

Hab. Puna Islands.

Species 45. (Fig. a, b, Mus. Brit.)

PLANORBIS CATILLUS. *Pla. testâ utriusque compressâ, parvâ, albâ, dextrali; spirâ compressâ, anfractibus quinque, angustis, lentè crescentibus, infra angulatis; aperturâ obliquè subovatâ, angustiusculâ, anticè productâ, marginè inferiori subangulatâ.*

THE LITTLE DISH PLANORBIS. Shell compressed on both sides, small, white, dextral, spire compressed, whorls five, narrow, slowly increased, angular below; aperture obliquely subovate, rather narrow, anteriorly produced, lower margin rather angular.

ANTON. — ? Adams. Genera of Mollusca.

Hab. — ?

Species 46. (Fig. a, b, Mus. Brit.)

PLANORBIS SALLEANUS. *Pla. testâ tumidâ, dextrali, ferrugineâ, leviusculâ; spirâ subcompressâ, angustâ; anfractibus quaternis, altis, supernè angustatis, infra mediani inflatis; aperturâ subobliquè ovatâ, anticè subexpansâ; disco inferiori lato, umbilicatâ.*

SALLE'S PLANORBIS. Shell tumid, dextral, ferruginous, rather smooth; spire rather compressed, narrow; whorls four, raised, narrow above, inflated below the middle; aperture rather obliquely

ovate; anteriorly rather expanded; lower disc broadly umbilicated.

DUNKER. Proc. Zool. Soc. 1853, p. 54.

Hab. St. Domingo.

Species 47. (Fig. a, b, Mus. Brit.)

PLANORBIS INFLATUS. *Pla. testâ magnâ, robustâ, altâ, lævigatâ, pallidè olivaceâ, infra mediani intusque castaneâ; spirâ parvâ, profundè concavâ; anfractibus quaternis, apicalibus tribus parvis, ultimo altissimo, supra saturam perelato, rotundo, infra mediani nigris inflato; disco inferiori concavo, anfractu apicali oblecto; aperturâ subauriformi, altâ, marginè inferiori subexpansâ.*

THE INFLATED PLANORBIS. Shell large, robust, high, smooth, pale olive, chestnut below the middle and within; spire small, deeply concave; whorls four, three apical small, last very high, much raised above the middle, round, more inflated below the middle; lower disc concave, apical whorl hidden; aperture rather ear-shaped, lower margin a little expanded.

DUNKER. Proc. Zool. Soc. 1848, p. 40.

Hab. — ?

Species 48. (Fig. a, b, Mus. Brit.)

PLANORBIS CIRCUMLINEATUS. *Pla. testâ succinâ, subpellucidâ, tumidiusculâ, dextrali, lavi; spirâ parvâ, anfractibus quaternis, rapidè crescentibus, ultimo lato, prope aperturam subexpansâ, aperturâ obliquè subovatâ, angustiusculâ, infra paulò expansâ.*

THE CIRCUMLINEAR PLANORBIS. Shell amber, rather pellucid, rather tumid, dextral, smooth; spire small, whorls four, rapidly increasing, last broad, a little expanded near the aperture; aperture obliquely subovate, rather narrow; a little expanded below.

SHUTTLEWORTH. — ? MS. Mus. Brit.

Hab. Porto Rico.

PLANORBIS.—PLATE VI.

Species 49. (Fig. a, b, Mus. Brit.)

PLANORBIS TERTIENSIS. *Pla. testâ tumidâ, pallidissimè corvâ, lœvigatâ; spirâ parâ, planulatâ, anfractibus tribus, ultimo tumida, supra suturam rotundè elevata; aperturâ obliquâ, angustâ, superiôrè subdilatatâ; disco inferiori concavo.*

THE THREE-TURNED PLANORBIS. Shell tumid, very pale horn, smooth; spire small, flattened; whorls three, last tumid, roundly elevated above the suture; aperture oblique, narrow, rather dilated above; lower disc concave.

D'ORBIGNY. — ? MS. Coll. Cam. in Brit. Mus.

Hab. St. Thomas, West Indies.

Species 50. (Fig. a, b, Mus. Brit.)

PLANORBIS ANDECOLUS. *Pla. testâ albâ, altâ, dextralî; spirâ subcomplanatâ, anfractibus tribus, convexis; ultimo maximo, altissimo versus marginem superiorem et paulò supra medium, angulato infrâ, ad marginem inferiorem subcarinato, post carinam latè et profundè umbilicato; aperturâ paulò depressâ, trigonâ, anticè productâ, acuminatâ, superiôrè latâ, subdepressâ.*

THE PLANORBIS OF THE ANDES. Shell white, high, dextral; spire rather flattened; whorls three, convex; last very large, very high, angular near the upper margin and a little above the middle,

slightly keeled at the lower margin, broadly and deeply umbilicated behind the keel; aperture a little depressed, trigonal, anteriorly produced, acuminate, broad, rather depressed above.

D'ORBIGNY. Voyage dans l'Amérique Méridionale, Pl. XLV.

Hab. South America.

Species 51. (Mus. Brit.)

PLANORBIS TENAGOPHILUS. *Pla. testâ, compressâ, solidâ, griseo-fulvâ; utriusque concavâ; apice umbilicato; anfractibus quinque, supra suturam angulatis; ultimo magno, superiôrè declivè, infrâ subcentricosâ, disco inferiori lato, versus marginem complanato, mediâ (hanc profundè) umbilicato.*

THE SHALLOW-WATER PLANORBIS. Shell broad, compressed, solid, fulvous-gray; concave on each side; apex umbilicated; whorls five, angular above the suture, last large, sloped above, somewhat ventricose below, lower disc broad, flattened towards the margin, umbilicated (not deeply) in the middle.

D'ORBIGNY. Voy. Amér. Meridionale, Pl. XLV., f. 17-20.

Hab. South America.

The funnel-shaped umbilicus on the spire is narrower and more decidedly angular than in *Planorbis commutatus*.



54



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PLANORBIS.

PLATE VII.

Species 52. (Fig. *a, b*, Mus. Brit.)

PLANORBIS KERIATOIDES. *Pla. testâ subcompressâ, albidâ, superi' truncato-conicâ, inf'ra planulatâ, variatâ, ad medium umbilico infundibuliformi excavatâ; spirâ depressâ, anfractibus quateris, ultimo magno.*

THE SHEAR-SHAPED PLANORBIS. Shell a little compressed, whitish, truncato-conical above, flattened below, keeled, hollowed in the middle, with a funnel-shaped umbilicus; spire depressed, whorls four, last large.

D'ORBIGNY. Voy. Amér. Méri'd. Pl. XLV., f. 1-4.

Hab. S. America.

Species 53. (Mus. Brit.)

PLANORBIS LUCIDUS. *Pla. testâ compressâ, semipellucidâ, lœvi, obscure castaneo-cornéâ; spirâ depressâ, anfractibus quinis subplanulatis, ultimo convexo, inf'ra medium subangulatâ; disco inferiori concavo, angustissimo, aperturâ subquadratâ, inf'ra latissimâ.*

THE LUCID PLANORBIS. Shell compressed, semipellucid, smooth, chestnut-horn; spire depressed, whorls five, rather flat, last convex, rather angular below the middle; lower disc concave, rather narrow, aperture rather square, rather broad below.

PHILIPPI — ? MS. Brit. Mus.

Hab. — ?

Species 54. (Fig. *a, b*, Mus. Brit.)

PLANORBIS SEPTEMGYRATUS. *Pla. testâ valdè depressâ, utrinque concavâ, fusco-subviridi, anfractibus septenis, angustissimis, ultimo angusto, aperturâ parvâ, obliquè oratâ.*

THE SEVEN-WHORLED PLANORBIS. Shell much de-

pressed, concave on both sides, brownish-green, whorls seven, very narrow, last narrow; aperture small, obliquely ovate.

ZEIGLER — ? MS. Brit. Mus.

Hab. Vienna.

A remarkably thin, wafer-like shell.

Species 55. (Fig. *a, b*, Mus. Sowerby.)

PLANORBIS BECKIANUS. *Pla. testâ tumidâ, sinistrâ, largitatè, cornéâ, medio anfractu et inf'ra costatâ, spirâ depressâ, anfractibus quateris, supra suturam elevatis, rotundis, ultimo notissimo, ventricosi, rotundo, inf'ra latissimo, aperturâ magnâ; disco inferiori profundè excavato, anfractu apicali obtecto.*

BECK'S PLANORBIS. Shell tumid, sinistral, smooth, horn, chestnut at the middle of the whorls and below; spire depressed, whorls four, raised above suture, rounded, last large, ventricose, rounded, rather broad below; aperture large, lower disc deeply excavated, apical whorl hidden.

DUNKER — ? Ad. Gen. of Sh.

Hab. — ?

Little differing from *Planorbis cornuus*, but with the whorls more uniformly rounded than in that somewhat variable species.

Species 56. (Fig. *a, b*, Mus. Brit.)

PLANORBIS PALLIDUS. *Pla. testâ tumidissimâ, lœvi, pallidè cornéâ, utrinque subcomplanatâ; spirâ angustâ, anfractibus quaternis, rapidè crescentibus, ultimo latissimo, superi' declivi, inf'ra medium inflato, disco inferiori subcomplanato; aperturâ obliquè subovatâ, margine superiori sinuato producto, depressa.*

PLANORBIS.—PLATE VII.

THE PALE PLANORBIS. Shell rather tumid, smooth, pale horn, flattened on each side; spire narrow, whorls four, quickly increasing, last rather broad, sloped above, inflated below the middle; lower disc a little flattened; aperture obliquely subovate, lower margin sinuously produced, depressed.

C. B. Adams. Basl. Proc. Nat. Hist. Vol. II. p. 102.
Hab. Jamaica.

Species 57. (Fig. a, b, Mus. Brit.)

PLANORBIS CHILENSIS. *Pla. testâ tumidiâsculâ, albâ, superiôrè complanâtâ; infriâ concavâ; anfractibus quinâs, mediocriter crescentibus, ultimo tumido; aperturâ magnâ, subquadratâ, margine inferiori rectiâsculâ.*

THE CHILI PLANORBIS. Shell rather tumid, white, flattened above, concave below; whorls five, moderately increased, last tumid; aperture large, rather square, lower margin rather straight.

ANTON — ? MS. Brit. Mus.
Hab. Chili.

Species 58. (Fig. a, b, Mus. Brit.)

PLANORBIS LANIERANUS. *Pla. testâ depressâ, corneo-castaneâ, translucidâ, levigatâ; spirâ compressâ, parvâ; anfractibus quaternis, ultimo superiôrè latiusculâ, infriâ angustiori, aperturâ angulatâ.*

LANIER'S PLANORBIS. Shell depressed, horny chestnut, translucent, smooth; spire compressed, small; whorls four, last rather broad above, rather narrower below.

D'ORBIGNY. Moll. Cuba.
Hab. Isl. Cuba.

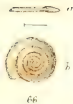
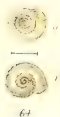
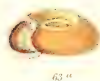
Species 59. (Fig. a, b, Mus. Brit.)

PLANORBIS ROSSMÄSLEH. *Pla. testâ parvâ, compressâ, ferrugineâ; spirâ subcomplanâtâ, anfractibus quaternis, rapidè crescentibus, rotundis; disco inferiori umbilicatâ; aperturâ obliquè ovatâ.*

ROSSMÄSLEE'S PLANORBIS. Shell small, compressed, ferruginous; spire rather flattened, whorls four, quickly increased, rounded; lower disc umbilicated; aperture obliquely ovate.

SCHMIDT — ? Adams, Genera of Shells.
Hab. Anerswald, near Leipsic.





PLANORBIS.

PLATE VIII.

Species 60. (Fig. a, b, Mus. Brit.)

PLANORBIS SPENCERI. *Pla. testā parvā, flavido-fuscā, subdepressā, sinistrali, levigatā; spirā complanatā, parvā, anfractibus quaternis, ultimo latissimo, superius convexiusculo, ad marginem obscurissime angulato, infra angulum angulatā; disco inferiori excavato; aperturā semilunari.*

SPENCER'S PLANORBIS. Shell small, yellowish-brown, subdepressed, sinistral, smooth; spire flattened, small, whorls four, last rather broad, rather convex above, very obscurely angular at the margin, narrowed below; lower disc excavated; aperture semilunar.

ALEX — ? MS. Brit. Mus.

Hab. Portugal.

Species 61. (Fig. a, b, Mus. Brit.)

PLANORBIS NYCTICULUS. *Pla. testā tenui, pellucidā, pulcherrime cornu, tumidiusculā; spirā planiusculā, medio excavatā, angustā, anfractibus quaternis, utriusque tumidiusculis; disco inferiori excavato; aperturā superius lato, infra angustatā.*

THE NEAT LITTLE PLANORBIS. Shell thin, pellucid, very pale horn, rather tumid; spire rather flat, a little excavated in the middle, narrow; whorls four, rather tumid on each side; lower disc excavated; aperture broad above, narrow below.

DUNKER. Proc. Zool. Soc. 1848, p. 40.

Hab. Malacca.

Species 62. (Fig. a, b, Mus. Brit.)

PLANORBIS UNGULATUS. *Pla. testā latā, depressā, arcuatā, corneo-rubescenti; spirā vix convexā, anfractibus septenis, levē crescentibus, superius angulatis, subcarinatis; disco inferiori convexo; aperturā obliquā, superius ovato angulatā, productā.*

THE TALONED PLANORBIS. Shell broad, depressed,

arched, reddish-horny, spire hardly convex; whorls seven, slowly increased, angular above, somewhat keeled, lower disc convex; aperture oblique, sharply angular above, produced.

CHITTY — ? MS. Brit. Mus.

Hab. Jamaica.

The sharp prominent angle in the margin of the whorls, with the slightly arched under surface, gives the profile of this shell a talon-like appearance.

Species 63. (Fig. a, b, Mus. Brit.)

PLANORBIS COMMUTATUS. *Pla. testā sinistrali, tumidā, ventricosā, pallidē fuscā, tenui; spirā infundibulatā; anfractibus quinque, angulatis, superius angulatis, infra centricosis, rotundis; disco inferiori profunde umbilicato, anfractu apicali oblecto; aperturā rotundo-subtrigoni.*

THE CHANGED PLANORBIS. Shell sinistral, tumid, ventricose, pale brown; spire funnelled, whorls five, angular, narrow, ventricose, rounded below; lower disc deeply umbilicated, apical whorl hidden; aperture roundly subtrigonal.

DUNKER — ? MS. Brit. Mus.

Hab. N. America.

Species 64. (Fig. a, b, Mus. Brit.)

PLANORBIS ARCTICUS. *Pla. testā parvā, pallidē fulvā, subdepressā; spirā parvā, pauli excavatā; anfractibus tribus, rotundis, rapidē crescentibus, tumidiusculis, disco inferiori late umbilicato, aperturā rotundā.*

THE ARCTIC PLANORBIS. Shell small, pale fulvous, rather depressed; spire small, a little excavated; whorls three, rounded, quickly increasing, rather tumid, lower disc broadly umbilicated; aperture rounded.

BECK — ? MS. Mus. Brit.

Hab. Greenland.

PLANORBIS.—PLATE VIII.

Species 65. (Fig. *a, b*, Mus. Brit.)

PLANORBIS GRACILENTUS. *Pla. testā dextrali, albidd, opacā; spirā planiusculā; anfractibus quinīs, apicalibus angustis, externis latiusculis, ad aperturam subdilatis; aperturā subtriangā; disco inferiori latē umbilicato.*

THE SLENDER PLANORBIS. Shell dextral, whitish, opaque; spire rather flat; whorls five, apical narrow, external rather broad; a little dilated at the aperture; aperture a little trigonal; lower disc broadly umbilicated.

GOULD —? MS. Brit. Mus.

Hab. Colorado Desert.

Species 66. (Fig. *a, b*, Mus. Brit.)

PLANORBIS DEPRESSISSIMUS. *Pla. testā complanată, caldē depressā, pellucidā, pallidē corneā, spirā complanată; anfractibus septenis, tenuibus, latē crescentibus, superne ad marginem acutē angulatis; disco inferiori planulato; aperturā lateraliter elongatā, angulo externo acuto.*

THE VERY FLAT PLANORBIS. Shell flattened, much depressed, pellucid, pale horn, spire flattened; whorls seven, thin, slowly increased, at the margin above sharply angular; lower disc flattened; aperture laterally lengthened, outer angle sharp.

MORICAND —? MS. Mus. Brit.

Hab. —?

The whorls are perhaps the flattest of any in the genus.

Species 67. (Fig. *a, b*, Mus. Brit.)

PLANORBIS SUBANGULATUS. *Pla. testā pallidē corneā, tumidiōsculā, sinistrali; anfractibus tribus, rapidē crescentibus, superne convexa, latiusculis; disco superiori lato, convexo; inferiori subangulato, excavato; aperturā superne lateraliter productā, infrā cecus medium inclinato.*

THE SUBANGULAR PLANORBIS. Shell pale, horny, rather tumid, sinistral whorls three, quickly increased; convex, rather broad; upper disc broad, convex, lower rather angular, excavated; aperture laterally produced above, inclined towards the middle below.

PHILIPPI. *Encycl.* 2, Pl. XXI, f. 6.

Hab. Malta, Sicily.

Species 68. (Mus. Brit.)

PLANORBIS SERICEUS. *Pla. testā sinistrali, tumidiōsculā, pallidē fuscā, spirā angustē infundibulatā; anfractibus quinīs, superne angulatis, angustatis; disco inferiori excavato, anfractibus rotundis; aperturā subtriangā, infrā expansā, rotundā.*

THE CHICORY PLANORBIS. Shell sinistral, rather tumid, pale brown, spire narrowly funnelled; whorls five, angular above, narrow; lower disc excavated, whorls rounded; aperture subtriangular, expanded, rounded below.

DUXKEE. *Proc. Zool. Soc.* 1848, 42.

Hab. —?

Differing from *Planorbis commutatus* in the proportionate narrowness of the whorls, and the funnel-shaped excavation is more angular, distinct, and narrow.



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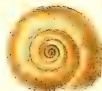
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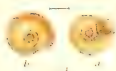
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PLANORBIS.

PLATE IX.

Species 69. (Mus. Brit.)

PLANORBIS ELEGANTULUS. *Pla. testâ obliquè compressâ, pellucidâ, cornuâ, dextrali, tenuiter striatâ, superiôrè concavâ, infôrè convexâ; spirâ parvâ, anfractibus tribus, ultimo lato, ad aperturam obliquè expanso; aperturâ perobliquè ovatâ.*

THE ELEGANT PLANORBIS. Shell obliquely compressed, transparent, horny, dextral, finely striated, convex above, concave below; spire small, whorls three, last wide, obliquely expanded at the aperture; aperture very obliquely ovate.

DOHERN. Proc. Zool. Soc. 1858, p. 134.

Hab. —?

Species 70. (Mus. Hanley.)

PLANORBIS TROCHOIDEUS. *Pla. testâ tumidiâsculâ, tenui, semipellucidâ, subcicrâ, distanter concentricè allopasciatâ, superiôrè concavâ, infôrè subconvapantâ, angustissimè umbilicatâ, internè segmentatâ; spirâ angustissimâ, ultimo anfractu superiôrè latè expanso; infra medium angulatâ, acutè carinatâ.*

THE TROCHIFORM PLANORBIS. Shell rather tumid, thin, semipellucid, rather green, distantly concentrically banded with white, convex above, rather flattened below, very narrowly umbilicated, internally divided in segments; spire very narrow, last whorl broadly expanded above; angular below the middle, acutely keeled.

BENSON. Asiatic Society Bengal, 1836, p. 742.

Hab. Barrackpore.

Remarkable for the way in which the outer whorl covers the inner, and the very small opening left in the centre of the upper and under discs.

Species 71. (Mus. Brit.)

PLANORBIS MORICANDI. *Pla. testâ sinistrali, tumidâ, ferruginâ; spirâ angustè infundibulatâ, anfractibus supra suturam angulatim elevatis; ultimo latè declivi; aperturâ trigonâ, infra medium subangulatâ, infra subrotundâ; disco inferiori umbilicato.*

MORICAND'S PLANORBIS. Shell sinistral, tumid, ferruginous; spire narrow, with narrow funnel-shaped cavity, whorls raised angularly above the suture, last broadly sloped; aperture trigonal, rather angular below the middle, a little rounded underneath; lower disc umbilicated.

BECK. Adams, Genera of Shells.

Hab. —?

A narrower shell than *Planorbis tenagophilus*, with the funnel-shaped opening more narrow and angular.

Species 72. (Fig. a, b, c, Mus. Brit.)

PLANORBIS MULTIVALVIS. *Pla. testâ cornuâ, sinistrali, altâ; spirâ exsertâ, subtruncatâ; anfractibus septenis, superiôrè angustatis angulatâ, ultimo compresso, alto, propè aperturam contracto tum tumidâ, ad aperturam expanso; aperturâ elevatâ, margine expanso; disco inferiori profundè umbilicato; anfractibus rotundis, tribus apicalibus obtectis.*

THE MANY-WHORLED PLANORBIS. Shell horny, sinistral, high, spire exserted, subtruncated; whorls seven, narrow and angular above, last compressed, deep, contracted near the aperture, then tumid, expanded at the aperture; aperture raised, margin expanded, lower disc deeply umbilicated; whorls rounded, three apical hidden.

CASE. Adams, Genera of Shells.

Hab. Lake Superior, Michigan.

In the contraction and swelling of the last whorl near the mouth, and expansion of the lip, this shell resembles *Planorbis campanulatus*, but the whorls of the spire are more numerous and are pushed out conically.

Species 73. (Fig. a, b, Mus. Brit.)

PLANORBIS FERRUGINEUS. *Pla. testâ tumidâ, ventricosâ, sinistrali, castaneo-cornuâ; spirâ concavâ, anfractibus senis, subangulatâ, supra suturam elevatis, infra angulim subelicticibus, ultimo lato, infra subconvexâ; aperturâ obliquè subtrigona; disco inferiori latè concavo; anfractibus subrotundis.*

PLANORBIS.—PLATE IX.

THE FERRUGINOUS PLANORBIS. Shell tumid, ventricose, sinistral, chestnut horn, spire concave; whorls six, rather angular, raised above the suture, rather sloped below the angle, last broad, rather convex below; aperture obliquely subtrigonal; lower disc broadly concave, whorls somewhat rounded.

SPIX. Test. Braz. Tab. XVIII., f. 1-2.

Hab. Brazil.

The whorls are more angular above than is the case in *Planorbis olivaceus*.

Species 74. (Fig. a, b, Mus. Brit.)

PLANORBIS FUSCUS. *Pla. testâ dextrali, depressâ, ferruginâ, superne convexiusculâ, infrâ latè excavatâ; spirâ angustâ; anfractibus tribus, ultimo lato; aperturâ obliquè angustatâ, margine integrâ.*

THE BROWN PLANORBIS. Shell dextral, depressed, iron-rust, rather convex above, broadly excavated below, spire narrow; whorls three, last broad; aperture obliquely narrow, margin entire.

DICKER. Proc. Zool. Soc. 1848, p. 42.

Hab. Valparaiso.

Species 75. (Fig. a, b, Mus. Brit.)

PLANORBIS NANUS. *Pla. testâ pallidè fuscâ, dextrali, compressâ, superne convexiusculâ, infrâ latè et profundè umbilicatâ; spirâ angustâ, complanatâ;*

anfractibus tribus, obliquè striatis, rapide crescentibus, ultimo latissimo; aperturâ depressâ, latissimâ, labio externo superne obliquè producto.

THE DWARF PLANORBIS. Shell pale fulvous, dextral, compressed, rather convex above, broadly and deeply umbilicated below; spire narrow, flat; whorls three, obliquely striated, rapidly increased, last very broad; aperture depressed, very broad, outer lip obliquely produced above.

BENSON. Proc. Zool. Soc. 1856, p. 186.

Hab. India.

Species 76. (Mus. Brit.)

PLANORBIS MODICUS. *Pla. testâ cornèâ, tumidâ, sinistrali, spirâ infundibulatâ; anfractibus quinis, propè suturam elevatis et angulatis, ultimo lato, declivi, concentricè tenuiter rugatâ; aperturâ subtrigonâ, disco inferiori concavo, anfractibus subplanulatis.*

THE MIDDLING PLANORBIS. Shell horny, tumid, sinistral, spire funnel-shaped; whorls five, raised and angular near the suture, last broad, sloped, concentrically finely wrinkled; aperture subtrigonal, lower disc concave, whorls rather flat.

BENSON. Adams, Genera of Mollusca.

Hab. India.

Belonging to the same group as *Planorbis corneus*, but smaller, with narrow, angular, funnel-like spiral excavation.



PLANORBIS.

PLATE X.

Species 77. (Fig. a, b, Mus. Hanley.)

PLANORBIS UMBILICALIS. *Pla. testâ dextrali, segmentatâ, fusca, tenui, nitenti, levigatâ, superâ tumido, infra planiusculâ, infra medium carinatâ; spirâ angustâ, planatâ; anfractibus tribus, ultimo magno, lato, supra carinam tumido; aperturâ obliquè lato, margine superiori sinuatum producto, disco inferiori medio angustè umbilicato.*

THE UMBILICAL PLANORBIS. Shell dextral, divided in segments, brown, thin, shining, smooth, tumid above, rather flat below, keeled below the middle; spire narrow, flat; whorls three, last large, broad, tumid above the middle; aperture obliquely broad, upper margin sinuously produced, lower disc narrowly umbilicated in the middle.

BENSON. Journ. Asi. Soc. Bengal, Vol. V. p. 741.

Hab. East Bengal.

Species 78. (Fig. a, b, Mus. Hanley.)

PLANORBIS CENOSUS. *Pla. testâ dextrali, segmentatâ, pallidè subviridi, levigatâ, superâ truncato-conicâ, infra subplanulatâ, medio angustè umbilicatâ; spirâ angustissimâ, ultimo anfractu latissimâ, infra medium acutè carinatâ; aperturâ trigonâ, margine superâ infraque flexuosim depressâ.*

THE MEXY PLANORBIS. Shell dextral, divided in segments, greenish, smooth, truncated-conical above, rather flat below, narrowly umbilicated in the middle; spire very narrow, sharply keeled below the middle; aperture trigonal, margin flexuously depressed above and below.

BENSON. Ann. Nat. Hist. 1850, p. 349.

Hab. Near Moradabad, Ceylon.

Species 79. (Fig. a, b, Mus. Hanley.)

PLANORBIS CANTORI. *Pla. testâ sordidè subviridi, dextrali, segmentatâ, superâ tumidâ, infra convexiusculâ, medio umbilicatâ; spirâ latiusculâ, ultimo anfractu lato, infra medium obtusè carinatâ;*

aperturâ subtrigonâ, margine superâ flexuosim productâ.

CANTOR'S PLANORBIS. Shell dull greenish, dextral, divided in segments, tumid above, convex below, umbilicated in the middle; spire rather broad, last whorl broad, obtusely keeled below the middle; aperture rather trigonal, upper margin flexuously produced.

BENSON. Ann. Nat. Hist. 1850, p. 349.

Hab. Barrackpore, India.

Species 80. (Fig. a, b, Mus. Brit.)

PLANORBIS PONSOMBYI. *Pla. testâ dextrali, altissimâ, ventricosâ, albâ, epidermide tenui pallidè flavidi indutâ, superâ subconicâ, infra latè et profundi umbilicatâ; spirâ subturritâ; anfractibus duobus, brevibus, subangulatis, ultimo anfractu superâ planulato, marginibus superiori inferiorique carinatis; aperturâ latâ, subtrigonâ, infra acuminatâ, superâ expansâ.*

PONSOMBY'S PLANORBIS. Shell dextral, very high, ventricose, white, covered with a yellowish thin epidermis, a little conical above, broadly and deeply umbilicated below; spire subturritated; whorls two, short, rather angular, last whorl flattened above, upper and lower margin keeled; aperture broad, rather trigonal, acuminated below, expanded above.

SMITH. (Carinifer.) Proc. Zool. Soc. 1875, No. 2.

Hab. California.

In *Planorbis bicarinata* and *Pl. aurita*, the spire is sunk, and not, as in this species, exerted. Otherwise, the two former much resemble the latter. I cannot see any reason for separating these shells generically. At least one very different species has an exerted spire.

Species 81. (Mus. Brit.)

PLANORBIS NEWBEERYI. *Pla. testâ dextrali, altissimâ, ventricosâ, corneâ, epidermide tenui indutâ, infra*

late et profundè infundibulata; spirâ exsertâ; anfractibus duobus, subangulatis, ultimo anfractu magno, ventricoso, superne infernèque crenulatum carinato, medio obscure carinato; aperturâ trigonâ, ferè ad medium ultimi anfractus depressâ, superne angulata, infra angulum productâ, infra medium angustatâ, acuminatâ.

NEWBERRY'S PLANORBIS. Shell dextral, very high, ventricose, horny, covered with a pale thin epidermis, with a deep and wide funnel-shaped cavity below; spire exserted; whorls two, rather angular, last whorl large, ventricose, crenulately keeled above and below, obscurely keeled in the middle; aperture trigonal, depressed almost to the middle of the last whorl, angular above, produced below the angle, narrow and acuminated below the middle.

LEE. Proc. Acad. Phil. 1854, p. 51.

Genus. *Corinifer*. Binney.

Hab. California.

Species 82. (Mus. Sowerby.)

PLANORBIS OBESUS. *Pla. testâ tumidâ, altâ, sinistrali, castaneo-subviridi, levâ, inflatâ; spirâ angustiusculâ, angulatim concavâ; anfractu ultimo magno, superne angulato, inferne rotundo; aperturâ semicirculari, disco inferiori medio concavo, anfractibus apicalibus obtectis.*

THE FAT PLANORBIS. Shell tumid, high, sinistral, greenish chestnut, thin, inflated; spire rather narrow, angularly concave; last whorl large, angular above, rounded below; aperture semicircular, lower disc concave in the middle, apical whorls hidden.

DUNKER. Proc. Zool. Soc. 1848, p. 41.

Hab. —?

Species 83. (Mus. Sowerby.)

PLANORBIS LENTUS. *Pla. testâ fusco-subviridi, medio anfractuum subcaeruleâ, sinistrali, tumidâ, altâ; spirâ depressâ; anfractibus planiusculis, prope suturam obscure carinatis, ultimo concentricè lirato, tenuiter spiralliter striatâ; disco inferiori excavato, anfractu apicali obtecto; aperturâ magnâ, ad anfractum ultimum contractâ, paulo elevatâ; intus fumoso-fusâ, margine incrassato, flexuoso, albo.*

THE SLACK PLANORBIS. Shell greenish-brown, bluish in the middle of the whorls, sinistral, tumid, high; spire depressed; whorls rather flat, obscurely keeled near the suture, last concentrically ridged, finely spirally striated, lower disc hollow, apical whorl hidden; aperture large, contracted at the last whorl, a little raised, smoky-brown within, margin thickened, white.

SAY. Albers, Monograph. Planorbis, Pl. III. f. 4-6.

Hab. S. Carolina.

More tumid and deep, and less sloped at the top of the whorls than *Planorbis tricoloris*.

Species 84. (Mus. Brit.)

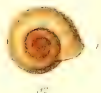
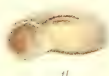
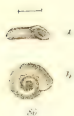
PLANORBIS PEREGRINUS. *Pla. testâ subcompressâ, dextrali, pallidissimè coracâ; obliquè striatâ; spirâ angustiusculo, medio subcaecato; ultimo anfractu lato, tumido, supra medium obscurissimè angulato; disco inferiori angulatim umbilicato; aperturâ subquadrangulatâ.*

THE WANDERING PLANORBIS. Shell subcompressed, dextral, very pale horn, obliquely striated; spire rather narrow, slightly excavated in the middle; last whorl broad, tumid, very obscurely angular above the middle, lower disc angularly umbilicated; aperture slightly quadrangular.

D'ORRÉBY. Voy. Amér. Mérid. Pl. XLIV. f. 13-16.

Hab. Bahia.





PLANORBIS.

PLATE XI.

Species 85. (Mus. Sowerby.)

PLANORBIS MERGUIENSIS. *Pla. testâ fusâ, concentricè tenuiter striatâ, tumidâ, angustâ, albâ, sinistrali; spirâ parvâ, infundibulatâ; anfractibus apicalibus angustis, ultimo superius angulato, supra suturam elevato; medio et infra rotundato; apertura semilunari, supra anfractum ultimum elevato, in his castaneo, margine subrepanso, latius incrassato.*

THE MERGUI PLANORBIS. Shell brown, concentrically finely striated, tumid, narrow, high, sinistral; spire small, funnelled; apical whorls narrow, last angular above, raised above the suture; rounded in the middle and below; aperture semilunar, raised above the last whorl, chestnut within, margin a little expanded, thickened within.

PHILIPP. — ? Hanley, Indian Shells.
Hab. Mergui, Burmah.

Species 86. (Fig. a, b, Mus. Sowerby.)

PLANORBIS CONCAVUS. *Pla. testâ parvâ, albâ, depressâ, dextrali, levigatâ; spirâ planiusculâ, anfractibus quaternis, rapidè crescentibus, superius inferiusque rotundatis; apertura obliquè rotundâ, magnâ; disco inferiori convexo.*

THE CONCAVE PLANORBIS. Shell small, white, depressed, dextral, smooth; spire rather flat, whorls four, quickly increased, rounded above and below; aperture obliquely rounded, large; lower disc hollow.

ANTHONY. — ? MS. Mus. Brit.
Hab. River Ohio.

Species 87. (Fig. a, b, Mus. Sowerby.)

PLANORBIS PARVUS. *Pla. testâ depressâ, complanatâ, semipellucidâ, subcicuto fuscâ, dextrali; spirâ latâ, subcomplanatâ; anfractibus quaternis, superius convexiusculis, inferius rotundatis; ultimo latiusculâ; apertura obliquè subovata, depressâ; disco inferiori convexo.*

THE SMALL PLANORBIS. Shell depressed, flat, semipellucid, greenish brown, dextral; spire broad, flattened; whorls four, convex above, rounded below; last rather broad; aperture obliquely subovate, depressed; lower disc concave.

SAY. Alb. Monog. Pl. IV. f. 19, 20.

Planorbis fallax. Say (?)

Hab. New York.

Species 88. (Mus. Brit.)

PLANORBIS DEFLEXUS. *Pla. testâ depressâ, pallidè cornea, levigatâ, dextrali; spirâ angustâ, depressâ, anfractibus tribus, superius convexis, inferius rotundis, rapidè crescentibus, ultimo lato; apertura magnâ, validè deflexâ.*

THE DOWN-BENT PLANORBIS. Shell depressed, pale horn, smooth, dextral; spire narrow, depressed, whorls three, convex above, rounded below, rapidly increased, last broad; aperture large, strongly deflected.

SAY. Long's Expedition, Appendix, Pl. XV. f. 8.

Planorbis virens. Adams.

Hab. River Ohio.

Species 89. (Mus. Brit.)

PLANORBIS ORIENTALIS. *Pla. testâ tenui, irregulariter undulatâ, flavidè albâ, sinistrali; spirâ angustâ, depressâ; anfractibus superius suturam parvè elevatis, ultimo lato, declivi, versus aperturam expanso; apertura supra infraque compressâ, marginè obliquè deflexâ; margine sinuato; disco inferiori concavo.*

THE ORIENTAL PLANORBIS. Shell thin, irregularly undulated, yellowish white, sinistral; spire narrow, depressed; whorls a little raised above the suture; last broad, sloped, expanded towards the aperture; aperture compressed above and below, large, obliquely deflected; margin sinuous; lower disc concave.

LAMARCK. Anim. s. Vert.

Hab. India.

PLANORBIS.—PLATE XI.

Species 90. (Mus. Brit.)

PLANORBIS STRAMINEUS. *Pla. testā tumidā, depressā, dextrali, stramineā; spirā complanatā, medio subdepressā, anfractibus quaternis, supernè planulatis, medio ventricosis, infra rotundis; disco inferiori excavato, anfractu apicali oblecto.*

THE STRAW-COLOURED PLANORBIS. Shell tumid, depressed, dextral, straw-coloured; spire flattened, middle rather depressed, whorls four, flattened above, ventricose in the middle, rounded below; lower disc excavated, apical whorl hidden.

DUNKEE. Proc. Zool. Soc. 1848, p. 42.

Hab. — ?

Species 91. (Mus. Brit.)

PLANORBIS GLABRATUS. *Pla. testā sinistrali, pulvornatā, tumidā, subdepressā, levigatā; spirā angustā, depressā, anfractibus angustè supra suturam elevatis; ultimo lato, supernè declivi; aperturā magnā, margine inferiori producta; disco inferiori medio excavato.*

THE POLISHED PLANORBIS. Shell sinistral, fulvous-horny, tumid, somewhat depressed, smooth; spire narrow, depressed; whorls narrowly raised above the suture; last broad, sloped above; aperture large, lower margin produced, and lower disc hollowed in the middle.

SAT. Adams' Genera of Mollusca.

Hab. Florida.

Species 92. (Fig. a, b, Mus. Sowerby.)

PLANORBIS ANTIGUENSIS. *Pla. testā latā, compressā, levigatā, fusco-cornēā, sinistrali; spirā depressā, anfractibus quinis, compressis, rotundis, prope marginem supra suturam elevatis, rapide crescentibus; ultimo latiusculo; aperturā magnā, elevatā, subtrigona; disco inferiori concavo.*

THE ANTIGUA PLANORBIS. Shell broad, compressed, smooth, brown-horny, sinistral; spire depressed, whorls five, compressed, rounded, raised near

the margin above the suture, quickly increased; last broad; aperture large, raised, rather trigonal; lower disc concave.

GUIDING. — ?

Hab. Antigua, West Indies.

Species 93. (Fig. a, b, Mus. Hanley.)

PLANORBIS CONVEXIUSCULUS. *Pla. testā subcomplanatā, albā, tumidiusculā, levigatā, dextrali; anfractibus quaternis, rapide crescentibus; ultimo lato, reversè aperturam expanso; aperturā obliquè subovatā, supra ultimam anfractum elevato; disco inferiori excavato.*

THE RATHER CONVEX PLANORBIS. Shell rather flattened, white, rather tumid, smooth, dextral; whorls four, rapidly increased; last broad, expanded towards the aperture; aperture obliquely subovate, raised above the last whorl; lower disc excavated.

HUTTON. Journ. Asiat. Soc. Beng. 1849, Vol. XVIII. p. 652.

Hab. Afghanistan.

Species 94. (Fig. a, b, Mus. Sowerby.)

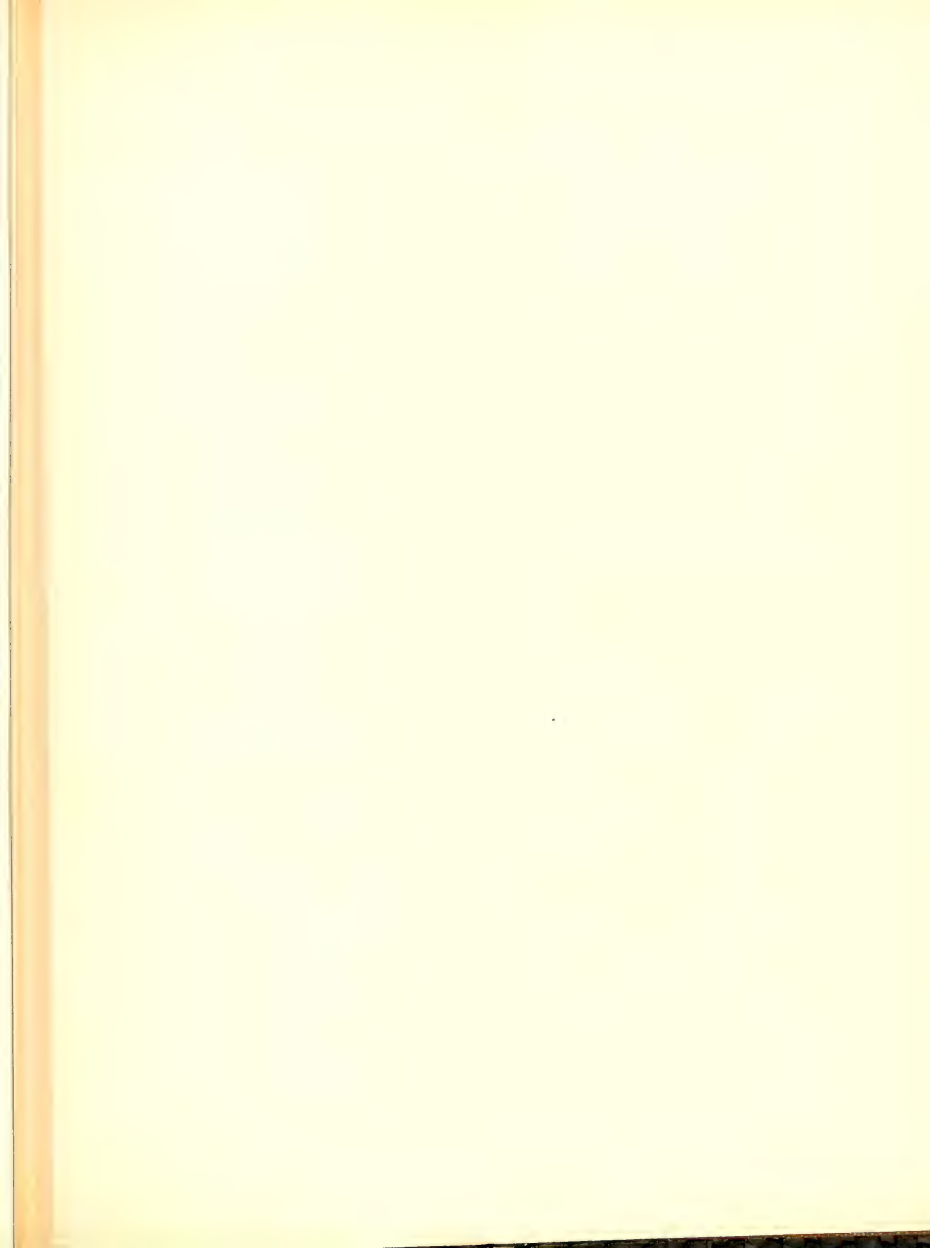
PLANORBIS EXACUTUS. *Pla. testā depressā, fusco-cornēā, dextrali, supernè convexā, infernè planiusculā, paulo infra medium acutè carinatā; aperturā compressā, lateraliter obliquè elongatā, margine externo acuminatā; disco inferiori subcomplanatā, medio umbilicatā.*

THE SHARP PLANORBIS. Shell depressed, brown-horny, dextral, convex above, rather flat below, sharply keeled a little below the middle; aperture compressed, laterally obliquely elongated, outer margin acuminate; lower disc rather flat, umbilicated in the middle.

SAY. Journ. Amer. Journ. Soc. Phil.

Planorbis Indicus. Benson.

Hab. United States.





PLANORBIS.

PLATE XII.

Species 95. (Fig. a, b, Mus. Brit.)

PLANORBIS PANAMENSIS. *Pla. testâ parvâ, albâ, compressâ, semipellucidâ, dextrali; spirâ parvâ; anfractibus tribus, depresso-concavis, distinctis, rapidè crescentibus; ultimo lato; disco inferiori concavo, anfractibus rotundis; aperturâ subovatâ.*

THE PANAMA PLANORBIS. Shell small, whitish, compressed, semipellucid, dextral; spire small; whorls three, depressed-convex, distinct, quickly increased; last broad; lower disc concave, anfractibus rotundis, aperture subovate.

D'ORBIGNY. Proc. Zool. Soc. 1848, p. 41.

Hab. Panama.

Resembling *Planorbis albus*, but with the whorls more rounded and distinct.

Species 96. (Mus. — ? Copied.)

PLANORBIS HELOICUS. *Pla. testâ latâ, complanatâ, dextrali, fusco-ferrugineâ, striatâ, paulo arcuatâ; spirâ planulatâ, anfractibus quibus, rotundis; aperturâ obliquè ovato, subrotundâ; disco inferiori excavato.*

THE NAIL-SHAPED PLANORBIS. Shell broad, flat, dextral, rusty-brown, striated, a little arched; spire flattened, whorls five, round; aperture obliquely rounded-oval; lower disc hollow.

D'ORBIGNY. Voy. Amér. Méri. Pl. XLV. fig. 9-12.

Hab. South America.

Species 97. (Mus. — ? Copied.)

PLANORBIS PAROSEIDES. *Pla. testâ rectâ, parvâ, latiusculâ, subcomplanatâ, dextrali, fusco, ferrugineâ, obliquè striatâ; spirâ complanatâ, anfractibus quibus, superius subcomplanatis, angustis, infra medium tumidiusculis, aperturâ depressâ, infusculâ inflatâ; disco inferiori latè umbilicato.*

THE 'DISH-LIKE' PLANORBIS. Shell straight, small, rather broad, flattish, dextral, rusty-brown, obliquely striated; spire flattened; whorls five, rather flattened above, narrow, rather tumid below the middle, aperture depressed, a little inflated below; lower disc broadly umbilicated.

D'ORBIGNY. Voy. Amér. Méri. Pl. XLV. f. 5-8.

Hab. South America.

Species 98. (Fig. a, b, Mus. Brit.)

PLANORBIS HELIOCHILUS. *Pla. testâ planulatâ, subdepressâ, pallidè fuscâ, sinistrali, levigatâ; spirâ infundibulatâ; anfractibus quibus, tumidiusculis, supra suturam angulatim elevatis, infra rotundis; ultimo superius subangustulatâ, tûm declivi, versus aperturam expanso; aperturâ superius subacuminatâ, infusculâ latâ.*

THE SUN-LOVING PLANORBIS. Shell flattened, subdepressed, pale fulvous, sinistral, smooth; spire funnelled; whorls five, rather tumid, angularly raised above the suture, rounded below; last somewhat angular above, then sloped, expanded towards the aperture; aperture subacuminated above, broad below.

D'ORBIGNY. Voy. Amér. Méri. Pl. XLV. f. 13-16.

Hab. South America.

Species 99. (Fig. a, b, Mus. Brit.)

PLANORBIS ANATINUS. *Pla. testâ minutâ, tumidâ, corneâ, depressâ, subglobosâ; spirâ parvâ, subexcavatâ; anfractibus tribus, altis, medio convexis; aperturâ angustâ, semilunari; disco inferiori angustè umbilicato.*

THE DUCK'S PLANORBIS. Shell minute, tumid, horny, depressed, subglobose; spire small, slightly excavated; whorls three, high, convex in the middle; aperture narrow, semilunar, lower disc narrowly umbilicated.

D'ORBIGNY. Voy. Amér. Méri. Pl. XLV. fig. 17-20.

Hab. South Africa.

Species 100. (Fig. a, b, Mus. Brit.)

PLANORBIS ARAKANENSIS. *Pla. pallidè corneâ, translucidâ, tumidâ, dextrali; spirâ angustâ; anfractibus ultimo tumido, superius subangustato, infra median ventricosâ; disco inferiori concavo, anfractu apicali oblecto.*

THE ARAKAN PLANORBIS. Shell pale horn, translucent, tumid, dextral; spire narrow; last whorl tumid, a little angular above, ventricose below the middle; lower disc concave, apical whorl hidden.

GOULD. — ? MS. Brit. Mus.

Hab. Trinidad.

PLANORBIS.—PLATE XII.

Species 101. (Fig. a, b, Mus. Brit.)

PLANORBIS ISABEL. *Pla. testâ parvâ, tumidâ, albâ, dextrali, ferrugineâ, lavigatâ; spirâ parvâ, subcomplanatâ; anfractibus tribus, angustiusculis, superiôrè subangulatis, tùm declivibus; ultimo magno, prope aperturam expanso; disco inferiori umbilicato; aperturâ angustâ, semilunari, margine superiori sinuatim producto.*

THE ISABEL PLANORBIS. Shell small, tumid, high, dextral, ferruginous, smooth; spire small, rather flat; whorls three, rather narrow, slightly angular above, then sloped; last large, expanded near the aperture; lower disc umbilicated; aperture narrow, semilunar, upper margin sinuously produced.

MORELET. — ? Adams. Genera of Mollusca.

Hab. — ?

Species 102. (Fig. a, b, Mus. Brit.)

PLANORBIS ACIES. *Pla. testâ parvâ, utrinque complanatâ, albâ, lavigatâ; anfractibus quinis, subrotundis, superiôrè angustiusculis, inferiôrè magis rotundis; aperturâ obliquè oratâ, supra suturam elevatâ.*

THE SPEAR PLANORBIS. Shell small, flattened on each side, white, smooth; whorls five, rather rounded, rather narrow above, more rounded below; aperture obliquely ovate, raised above the suture.

PORRO. Meg. Villa. Cat. 1844, p. 8.

Hab. Milan.

Species 103. (Mus. Brit.)

PLANORBIS LARGILLIERTI. *Pla. testâ truncato-conicâ, castaneâ, altiusculâ, nitentî, infra medium subplandatâ, suprâ declivi; spirâ angustatâ, anfractibus tribus, angustissimis, ultimo magno, tumido; aperturâ subtrigoniâ, margine superiori flexuosim depressâ; disco inferiori angustè umbilicato.*

LARGILLIERT'S PLANORBIS. Shell truncated-conical, chestnut, rather raised, shining, rather flattened below the middle, sloped above; spire narrow; whorls three, very narrow, last large, tumid; aperture rather trigonal; upper margin flexuously depressed; lower disc with a narrow umbilicus.

— MS.

Hab. — ?

Species 104. (Fig. a, b, Mus. Sowerby.)

PLANORBIS VERMICULARIS. *Pla. testâ olivaceo-viridî, politâ, parvâ, dextrali; spirâ planiusculâ, anfractibus quinis, rotundis, angustatis, declivibus, infra medium subcentricosis, subangulatis; disco inferiori concavo; aperturâ subtrigoniâ.*

THE VERMICULAR PLANORBIS. Shell olive-green, polished, small, dextral; spire rather flattened; whorls five, rounded, narrow, sloped, rather ventricose below the middle, slightly angular; lower disc concave; aperture subtrigonal.

SOWERBY.

Hab. — ?

Shell with a broader disc and more whorls than *Planorbis parens*, which, from its colour and general form, it resembles.



PLANORBIS.

PLATE XIII.

Species 105. (Fig. a, b, Mus. Brit.)

PLANORBIS PERFORATUS. *Pla. testā parvā, tumidā, pallidē cornū, truncato-subconicā, spirā angustissimā, anfractū ultimo tumido, alto, superiō declivi, infra medium ventricosā; disco inferiori planulato, medio angustissimē et profundē umbilicatō.*

THE PERFORATED PLANORBIS. Shell small, tumid, pale horn, truncated-subconical, spire very narrow, last whorl tumid, raised, sloped above, ventricose below the middle; lower disc flattened, narrowly and deeply umbilicated in the middle.

GOULD — ? MS. Mus. Brit.

Hab. United States.

Species 106. (Mus. Brit.)

PLANORBIS CILTRATUS. *Pla. testā pellucidā, hyalinā, albā, truncato-conicā, spirā parvā, anfractibus tribus, depressis; anfractu ultimo declivi, infra planato, margine acuminato; aperturā obliquē subtriangulā, angustā; margine externo infus acutē angulatō; disco inferiori plano, medio angustē umbilicatō.*

THE SHARPENED PLANORBIS. Shell pellucid, hyaline, white, truncato-conical, spire small, whorls three, sunk; last whorl sloped, flattened below, margin acuminated; aperture obliquely subtriangular, narrow; outer margin sharply angular below; lower disc umbilicated.

D'ORBIGNY — ? MS. Mus. Brit.

Hab. St. Vincent.

Species 107. (Mus. Brit. — ? Copied.)

PLANORBIS MONTANUS. *Pla. testā depressā, pallidē fuscā, sinistrali; spirā infundibulatā; anfractu ultimo tumido, superiō infus angulatō; disco inferiori concavo; aperturā subquadrilaterali, magnā, superiō anfractum ultimum elevatā.*

THE MOUNTAIN PLANORBIS. Shell depressed, pale fawn, sinistral; spire funnelled; last whorl tumid, angular above and below; lower disc concave; aperture rather quadrilateral, large, raised above the last whorl.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLIV. f. 5, 8.

Hab. South America.

Species 108. (Mus. Brit.)

PLANORBIS AMMON. *Pla. testā sinistrali, marginā, ventricosissimā, albā, pallidē subcili-fuscā, concentricē rugatā; spirā profundē infundibulatā; anfractibus quatuor, superiō suturam rotundē elevatā; ultimo lato, rapidē crescenti, ad aperturam expanso; disco inferiori profundē excavato; aperturā magnā, altissimā, subciliatā, superiō superiō suturam elevatā, acuminatā; infra anfractum ultimum rotundē productō, intus subcastaneo, margine interno incrassatō.*

THE AMMON PLANORBIS. Shell sinistral, very large, very ventricose, high, pale greenish-fawn, concentrically wrinkled; spire deeply funnelled; whorls four, roundly elevated above the suture; last wide, rapidly enlarged, expanded at the aperture; lower disc deeply hollow; aperture large, very high, subovate, raised above over the suture, acuminated; roundly produced below the last whorl, rather chestnut within, lower margin thickened.

GOULD. United States' Expedition.

Hab. America.

The deep specimen of *Pla. corpulentus*, figured in the first plate, resembles this species, but is not nearly so high nor so ventricose, and the upper part of the whorls are angular instead of being round.

Species 109. (Mus. Brit.)

PLANORBIS ELEVATUS. *Pla. testā parvā, albā, dextrali, levigatā, altiusculā; spirā planulatā, anfractibus concentricis, ultimo subquadrato, superiō declivi, superiō infus angulatō; aperturā infra angulata ultimā anfractibus depressā, magnā, superiō infus angulatā, medio convexā; disco inferiori angulatim concavo.*

THE ELEVATED PLANORBIS. Shell small, white, dextral, smooth, rather high; spire flat, whorls a little convex, last rather square, sloped above, angular above and below; aperture depressed below the angle of the last whorl, convex in the middle; lower disc angularly concave.

SAY. Journ. Bost. Soc. Nat. Hist. 3, Pl. III. f. 15.

Hab. Vermont.

The above name is probably given to the shell because the last whorl against the mouth is raised considerably above the aperture.

PLANORBIS.—PLATE XIII.

Species 110. (Mus. Brit.)

PLANORBIS LENTICULARIS. *Pla. testâ parvâ, subcon-*
pressâ, fuscâ, levî, dextrali; spirâ planiusculâ,
anfractibus tribus, convexiusculis, ultimo supernè
angulato, carinato, infrà angustatâ; disco inferiori
profundè umbilicato; aperturâ subtrigonâ, ad
angulum externum subacuminatâ.

THE LENTICULAR PLANORBIS. Shell small, rather flat,
brown, smooth, dextral; spire rather flattened,
whorls three, rather convex, last angular above,
keeled, narrow below; lower disc deeply umbi-
licated; aperture subtrigonal, acuminate at the
outer angle.

HARTMAN — ? Adams, Genera of Mollusca.

Planorbis opercularis. Gould.

Hab. Sacramento River.

Species 111. (Fig. a, b, Mus. Brit.)

PLANORBIS GUADALOUPENSIS. *Pla. testâ sinistrali, com-*
pressâ, latâ, fulvâ, politâ; spirâ concavâ, anfracti-
bus senis, convexiusculis; ultimo anfractu magno,
supra suturam elevatâ, tum declivî, infrà latius-
culâ; disco inferiori convexo; aperturâ subtrigonâ,
margine inferiori ad anfractum ultimum pro-
ducto.

THE GUADALOUPE PLANORBIS. Shell sinistral, com-
pressed, broad, fulvous, polished; spire concave,
whorls six, convex; last whorl large, raised
above the suture, then sloped, rather broad be-
low; lower disc convex; aperture rather tri-
gonal, lower margin produced on the body
whorl.

SOWERBY. Genera of Recent and Fossil Shells.

Hab. Guadeloupe.

Species 112. (Mus. Brit.)

PLANORBIS DILATATUS. *Pla. testâ albâ, dextrali, supernè*
angulatâ, infrà angulum angustatâ, disco inferiori
profundè excavato, aperturâ maximâ, trigonâ,
superiôrè complanatâ, infrà acuminatâ.

THE DILATED PLANORBIS. Shell white, dextral, an-
gular above, narrow below the angle, lower disc
deeply excavated, aperture very large, trigonal,
flattened above; acuminate below.

PFEIFFER. Moll. de l'Allemagne, Vol. II. p. 165.

Hab. Massachusetts.

The last whorl suddenly expands towards the
mouth, which is the largest of the whole genus in
proportion to the body whorl.

Species 113. (Mus. Brit.)

PLANORBIS SWINHOLEI. *Pla. testâ subdepressâ, semipel-*
lucidâ, fuscâ, subconico-truncatâ, supernè planu-
latâ, medio subangulatâ productâ, infrà planu-
latâ; disco inferiori angustè umbilicato; aperturâ
subtrigonâ, margine externo producto, margine
superiôrè flexuosim depressâ.

SWINHOLE'S PLANORBIS. Shell subdepressed, semipel-
lucid, brown, rather angularly truncated, flat-
tened above, somewhat angularly produced in the
middle, flattened below, lower disc narrowly um-
bilicated; aperture rather trigonal, outer margin
produced; upper margin flexuously depressed.

H. ADAMS. Proc. Zool. Soc.

Hab. Isl. Formosa.





115a



115b



115c



115d



115e



115f



115g



115h



115i



115j



115k



115l



115m



115n



115o



115p



115q

PLANORBIS.

PLATE XIV.

Species 114. (Fig. a, b, Mus. Brit.)

PLANORBIS DEFORMIS. *Pla. testā parvā, cinereo-ferruginea, complanata, dextrali; spirā planulatā; anfractibus quaternis, tumidis, subrotundis; ultimo versus aperturam irregulariter tumido, ad marginem expanso; apertura arcuato-conica, anfractum ultimum supra inflexū superante; disco inferiori ad marginem planulato, medio concavo.*

THE DEFORMED PLANORBIS. Shell small, rusty-grey, flattened, dextral; spire flattened, whorls four, tumid, rather rounded, last irregularly swelled, expanded at the margin; aperture curved-conical, extending above and below the last whorl; lower disc flattened at the margin, concave in the middle.

LAMARCK. Anim. sans Vert.

Hab. —?

The last whorl becomes tumid a little way before the expansion of the aperture.

Species 115. (Fig. a, b, Mus. Brit.)

PLANORBIS ALEXANDRINUS. *Pla. testā dextrali, subcompressā, fulvā, anfractibus quaternis, ultimo latiusculo, medio tumido, infra subangustato; apertura subtrigona, dentibus quinque laminatis longè internis armatā; margine intus incrassato; disco inferiori latè umbilicato.*

THE ALEXANDRINE PLANORBIS. Shell dextral, rather compressed, fulvous, whorls four, last rather wide, middle tumid, rather narrow below; aperture subtrigonal, armed far back internally with five teeth; margin thickened within; lower disc broadly umbilicated.

EHRENBERG. Roth. Moll. Sp. Pl. II. f. 8.

Genus, *Planorbula*. Haldeman.

Hab. Egypt.

This species belongs to the section which has been separated under the generic name of *Planorbula*. Far back in the throat may be seen laminated plates jutting out so as to contract the opening.

Species 116. (Mus. Brit.)

PLANORBIS DENTATUS. *Pla. testā dextrali, compressā, fulvā, spirā planiusculā; anfractibus convexis, supernè latis, infra medium angustatis, disco superiori lato, disco inferiori angustato, profundè et angustè excavato; apertura magnā, infra anfractum ultimum productā, longè intus laminatim tridentatā, margine intus incrassato.*

THE TOOTHED PLANORBIS. Shell dextral, compressed, fulvous, spire rather flat; whorls convex, broad above, narrow below the middle, upper disc broad, lower disc narrow, deeply and narrowly excavated; aperture large, produced below the last whorl, with three laminar teeth far within, margin thickened within.

DUNER. (Planorbula) —? Adams' Gen. of Moll.

Hab. —?

Species 117. (Fig. a, b, Mus. Brit.)

PLANORBIS ALBICANS. *Pla. testā albidā, solidiusculā, dextrali, spirā planulatā; anfractibus convexiusculis, quaternis, moderatè crescentibus, ultimo ad aperturam valdè deflexo, disco inferiori angulatum excavato; apertura usque ad marginem inferiorem ultimi anfractūs depressā.*

THE WHITISH PLANORBIS. Shell whitish, rather solid, dextral, spire rather flattened; whorls four, rather convex, moderately increased, last much bent down at the aperture, lower disc angularly convex; aperture bent down to the lower margin of the last whorl.

PFEIFFER.

Hab. Lima.

Species 118. (Fig. a, b, Mus. Brit.)

PLANORBIS COMPRESSUS. *Pla. testā compressā, latiusculā, pallidā, levigatā, dextrali, supernè angustatā, infra latā, subcarinatā, spirā depressā; apertura obliquè pyramidalatā, supernè angustatā, margine inferiori productā.*

PLANORBIS.—PLATE XIV.

THE COMPRESSED PLANORBIS. Shell compressed, rather broad, pale, smooth, dextral, narrowed above, broad below, somewhat keeled, spire depressed; aperture obliquely pyramidal, angular above, lower margin produced.

HUTTON. Journ. Asi. Soc. Beng. Vol. III. p. 91.

Planorbis Towhataensis. Moulsson.

Hab. River Ganges.

Species 119. (Mus. Brit.)

PLANORBIS DENTIFERUS. *Pla. testâ angustâ, tumidâ, albidâ, spirâ planiusculâ; anfractibus quaternis, altis, superne centricosis, inferne subangustatis, disco inferiori subangustâ excavato; aperturâ magnâ, auriformi, super infrapne ultimum anfractum productâ, longè intus quinqueferarum laminarum decussatâ.*

THE TOOTH-BEARING PLANORBIS. Shell narrow, tumid, whitish, spire rather flat; whorls four, high, ventricose above, slightly narrowed below, lower disc rather narrowly excavated; aperture large, ear-shaped, produced above and below the last whorl, with five laminar teeth far within.

ADAMS, C. B. Contributions to Conchology.

Hab. Jamaica.

Species 120. (Fig. a, b, Mus. Hanley.)

PLANORBIS HYPTIOCYCLOS. *Pla. testâ tumidâ, albidâ, dextrali, spirâ depressâ; anfractibus tribus, latiusculis, supra suturam tumidè elevatis; aperturâ supra suturam elevatâ, tum declivè, margine inferiori obliquâ, disco inferiori excavatâ.*

THE REFLECTED PLANORBIS. Shell tumid, whitish, dextral, spire depressed; whorls three, rather broad, raised in a swelling above the suture; aperture raised above the suture, then sloped, lower margin oblique, lower disc excavated.

BENSON. Ann. Nat. Hist. 1863, Ser. III. Vol. II. p. 89.

Hab. Ceylon.

Species 121. (Fig. a, b, Mus. Hanley.)

PLANORBIS ROTULA. *Pla. testâ parvâ, pallidè fuscâ, tumidiusculâ, levigatâ, dextrali, spirâ depressâ;*

anfractibus quinis, convexis, supra suturam paulè elevatis, disco inferiori latè concavo, anfractibus rotundis; aperturâ obliquè ovatâ.

THE LITTLE WHEEL PLANORBIS. Shell small, pale fulvous, rather tumid, smooth, dextral, spire depressed; whorls five, convex, a little raised above the suture, lower disc broadly concave, whorls round; aperture obliquely ovate.

BENSON. Ann. Nat. Hist. 1863, Series II. Vol. V. p. 351.

Hab. Moradabad.

Species 122. (Fig. a, b, Mus. Brit.)

PLANORBIS CORINNA. *Pla. testâ parvâ, albidâ, levigatâ, dextrali; anfractibus quaternis, rotundis, distinctis; disco superiori subdepresso, disco inferiori concavo; aperturâ transversè subovatâ.*

THE CORINNA PLANORBIS. Shell small, whitish, smooth, dextral; whorls four, rounded, distinct; upper disc rather depressed, lower disc concave; aperture transversely subovate.

GRAY. Proc. Zool. Soc. 1850.

Hab. New Zealand.

Species 123. (Fig. a, b, Mus. Brit.)

PLANORBIS INTERTEXTUS. *Pla. testâ angustâ, altâ, sinistrâ, tenuissimè striatâ, castaneâ, distantè concentricè albo-fuscatâ et nigro-lineatâ, spirâ medio angustè infundibulatâ; anfractu ultimo supra suturam angulatim elevato, disco inferiori lato, angulato, excavato; aperturâ altâ, subtriangoni, intus griseâ.*

THE TEXTILE PLANORBIS. Shell narrow, high, sinistral, very finely striated, chestnut, distantly concentrically white-banded and black-lined, spire narrowly funnelled in the middle; last whorl raised above the suture in an angle, lower disc broad, angular, hollow; aperture high, sub-trigonal, grey within.

SHUTTLEWORTH. —? MS. Brit. Mus.

Hab. Florida.

Resembling *Planorbis triangulatus*, excepting in the white bands bordered by dark lines appearing on the surface of the outer whorl.

PLANORBIS.

	Plate.	Species.		Plate.	Species.
<i>Acies, Perra</i>	XII.	102	<i>costulatus, Krauss</i>	IV.	26
<i>affinis, Adams</i>	IV.	28	<i>cultratus, D'Orbigny</i>	XIII.	106
<i>albicans, Pilsbry</i>	XIV.	117	<i>declivis, Sowerby</i>	IV.	29
<i>albatus, Mallet</i>	III.	17	<i>deflexus, Say</i>	XI.	88
<i>Alexandrinus, Ehrenberg</i>	XIV.	115	<i>deformis, Leach</i>	XIV.	114
<i>ammonius, Beek.</i> Not identified.			<i>dentatus, Leach</i>	XIV.	116
<i>Ammon, Gould</i>	XIII.	108	<i>dentiferus, Adams</i>	XIV.	119
<i>anatinius, D'Orbigny</i>	XII.	99	<i>depressissimus, Mörch</i>	VIII.	66
<i>Andecolus, D'Orbigny</i>	VI.	50	<i>dilatatus, Pfeiffer</i>	XIII.	112
<i>anisus, Beek.</i> Not identified.			<i>dubius, Hartman.</i> Unidentified.		
<i>Antiguensis, Guldberg (?)</i>	XI.	92	<i>eburneus, Gray</i>	V.	38
<i>antropus, Conrad.</i> Not identified.			<i>elegantulus, Dohrn</i>	IX.	69
<i>Arakanensis, Gould</i>	XII.	100	<i>elevatus, Say</i>	XIII.	109
<i>Areteus, Beek</i>	XIII.	64	<i>engonotus, Conrad.</i> Not identified.		
<i>armigerus, Say</i>	III.	18	<i>exacutus, Say</i>	XI.	94
<i>auritus, Sowerby (Redfieldi, by error)</i>	III.	20	<i>exustus, Deshayes</i>	IV.	31
<i>Bahiensis, Dunker.</i> Not identified.			<i>ferreus, Spix</i>	IX.	73
<i>Beckianus, Dunker</i>	VII.	55	<i>Fulkei, Dunker.</i> Not identified.		
<i>Bengalensis, Dunker</i>	IV.	27	<i>fusus, Dunker</i>	IX.	71
<i>biangulatus, Sowerby</i>	IV.	25	<i>Gilberti, Dunker</i>	V.	37
<i>bicarinatus, Say</i>	I.	7	<i>glaber, Jeffreys (?)</i>	II.	19
<i>brunneus, Gray</i>	V.	40	<i>glabratus, Say</i>	XI.	91
<i>calathus, Benson</i>	IV.	39	<i>gracilentus, Gould</i>	VIII.	65
<i>campanulatus, Say</i>	II.	11	<i>Guadaloupensis, Sowerby</i>	XIII.	111
<i>Cantori, Benson</i>	X.	79	<i>lehophalus, D'Orbigny</i>	XII.	98
<i>carinatus, Muller</i>	II.	12	<i>heloicus, D'Orbigny</i>	XII.	96
<i>catillus, Adams (?)</i>	VI.	45	<i>hemisphaeroides, Benson.</i> Not identified.		
<i>Chilensis, Anton</i>	VII.	57	<i>Hindsianus, Dunker</i>	VI.	41
<i>Chinensis, Dunker.</i> Not identified.			<i>humilis, C. B. Adams.</i> Not identified.		
<i>circumlineatus, Shuttleworth</i>	VI.	18	<i>hyptiocyclus, Benson</i>	XIV.	120
<i>coarctatus, Sowerby</i>	III.	21	<i>Idus, Benson</i>	XI.	91
<i>cænosus, Benson</i>	X.	78	<i>inflatus, Dunker</i>	VI.	47
<i>commutatus, Dunker</i>	VIII.	63	<i>intermedius, Charp.</i> Not identified.		
<i>complanatus, Linnaeus</i>	I.	5	<i>intertextus, Shuttleworth</i>	XIV.	122
<i>compressus, Hutton</i>	XIV.	118	<i>Isabel, Mallet</i>	XII.	101
<i>concavus, Anthony</i>	XI.	86	<i>kermatoides, D'Orbigny</i>	VII.	52
<i>contortus, Muller</i>	II.	9	<i>lacustris, Lightfoot</i>	II.	16
<i>convexiusculus, Hutton</i>	XI.	93	<i>Lanieranus, D'Orbigny</i>	VII.	58
<i>cretus, Adanson.</i> Not identified.			<i>Largillierii</i>	XII.	103
<i>coriuna, Gray</i>	XIV.	122	<i>lenticularis, Hartman (?)</i>	XIII.	110
<i>corneus, Linnaeus</i>	I.	1	<i>lentus, Say</i>	X.	83
<i>Coromandelicus, Kuster</i>	IV.	34	<i>leucostoma=spirorbis</i>	II.	11
<i>corpulentus, Say</i>	IX.	4	<i>limosa, Dunker.</i> Unidentified.		
			<i>lucidus, Philippi (?)</i>	VII.	55

PLANORBIS.

	Plate.	Species.		Plate	Species.
<i>lugubris</i> , <i>Wagner</i>	III.	24	<i>Ponsonbyi</i> , <i>Smith</i>	X.	80
<i>Macnabianus</i> , <i>Adams</i>	V.	41	<i>Redfieldi</i> , <i>C. B. Adams</i> (<i>succineus</i> , Sowb. by error)	III.	19
<i>magnificus</i> , <i>Conrad</i> . Not identified.			<i>regularis</i> , <i>Lea</i> . Unidentified.		
<i>marmoratus</i> , <i>Michaud</i> . Unidentified.			<i>Rossmäsleri</i> , <i>Schmidt</i>	VII.	59
<i>Merguensis</i> , <i>Philippi</i>	XI.	85	<i>rotula</i> , <i>Benson</i>	XIV.	121
<i>modicus</i> , <i>Benson</i>	IX.	76	<i>Rupelli</i> , <i>Dunker</i> . Unidentified.		
<i>montanus</i> , <i>D'Orbigny</i>	XIII.	107	<i>Salleanus</i> , <i>Dunker</i>	VI.	46
<i>Moricandi</i> , <i>Beck</i>	IX.	71	<i>septemgyratus</i> , <i>Zeigler</i>	VII.	54
<i>multivalvis</i> , <i>Cass</i>	IX.	72	<i>sericus</i> , <i>Dunker</i>	VIII.	68
<i>nanus</i> , <i>Benson</i>	IX.	75	<i>Sibiricus</i> , <i>Dunker</i>	V.	35
<i>Natalis</i> , <i>Krauss</i>	IV.	32	<i>sindicus</i> , <i>Benson</i> . Omitted.		
<i>nautileus</i> , <i>Linnaeus</i>	II.	8	<i>Spenceri</i> , <i>Allen</i>	VIII.	60
<i>Newberryi</i> , <i>Lea</i>	X.	81	<i>spirorbis</i> , <i>Müller</i>	II.	14
<i>nitidulus</i> , <i>Dunker</i>	VIII.	61	<i>stagnicola</i> , <i>Morelet</i>	V.	43
<i>nitidus</i> , <i>Müller</i>	II.	15	<i>Stelzneri</i> , <i>Dohrn</i>	V.	36
<i>obesus</i> , <i>Dunker</i>	X.	82	<i>stramineus</i> , <i>Dunker</i>	XI.	90
<i>obtusus</i> , <i>Deshayes</i>	V.	39	<i>subangulatus</i> , <i>Philippi</i>	VIII.	67
<i>olivaceus</i> , <i>Spix</i>	I.	6	<i>subcrenatus</i> , <i>Carpenter</i> . Omitted.		
<i>opercularis</i> , <i>Gould</i>	XIII.	110	<i>succineus</i> , <i>Sowb.</i> , see <i>Redfieldi</i>	III.	19
<i>orbiculatus</i> , <i>Morelet</i>	III.	22	<i>Swinhoei</i> , <i>H. Adams</i>	XIII.	113
<i>orientalis</i> , <i>Lamarck</i>	XI.	89	<i>teniatus</i> , <i>Morelet</i>	V.	42
<i>pallidus</i> , <i>C. B. Adams</i>	VII.	56	<i>tenagophilus</i> , <i>D'Orbigny</i>	VI.	51
<i>Panamensis</i> , <i>D'Orbigny</i>	XII.	95	<i>tersvanus</i> , <i>D'Orbigny</i>	VI.	49
<i>parallelus</i> , <i>Say</i> . Unidentified.			<i>Tondanensis</i> , <i>Mousson</i>	XIV.	118
<i>paropseides</i> , <i>D'Orbigny</i>	XII.	97	<i>trivoltis</i> , <i>Say</i>	I.	2
<i>parvus</i> , <i>Say</i>	XI.	87	<i>trochoides</i> , <i>Benson</i>	IX.	70
<i>peregrinus</i> , <i>D'Orbigny</i>	X.	84	<i>umbilicatus</i> , <i>Benson</i>	X.	77
<i>perforatus</i> , <i>Gould</i> (?)	XIII.	105	<i>ungulatus</i> , <i>Chitty</i>	VIII.	62
<i>Peruvianus</i> , <i>Broderip</i>	I.	3	<i>vermicularis</i> , <i>Sowerby</i>	XII.	104
<i>Pfeifferi</i> , <i>Krauss</i>	IV.	33	<i>vertes</i> , <i>Lea</i>	II.	13
<i>Philippinarum</i> , <i>Dunker</i>	III.	23			

MONOGRAPH
OF THE GENUS
PLANAXIS.

By Thy kind power and influencing care
The various creatures live, and move, and are,—*Milton*.



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PLANAXIS.

PLATE I.

Genus PLANAXIS. *Lawrence*.

Testa ovato-conica, solida, plerumque spiralliter sulcata; spira plerumque brevis, conica; apertura subtriangularis, intus denticulata, antice leviter canalifera, emarginata; columella subarcuata, planata, ad terminum truncata; operculum ovato-oblongum, unispirale, nucleo fere terminati.

Shell ovately conical, solid, generally spirally grooved; spire for the most part short, conical; aperture rather trigonal, tooth-ridged within, with a slight canal and notch in front; columella slightly arched, flattened, truncated at the end; operculum ovate-oblong, with one-whorled spire, nucleus nearly terminal.

Few genera so restricted in numbers are so widely spread in their habitats. We have identified 39 species, of which the greater number are tenants of Australian, South Sea Island, and Philippine groups. The Red Sea and Persian Gulf, the Mauritius and West Indies contribute their portion; the Chinese and Indian Seas have several, but there are no European species. The animals are marine, but partly amphibious, and spend a large portion of their existence above water. The slight canal and notch at the front of the aperture, and the flattened columella terminating in a notch, render this genus characteristic and easily distinguishable.

Species 1. (Mus. Hanley.)

PLANAXIS ENCAUSTICUS. *Pla. testâ crassâ, brevi, albâ, verrucâ, fuscoque nodulâ et fasciâ, levigatâ; anfractibus senis ad septuages, ultimo ventricosâ, infra medium rotundâ, ad suturam angustè angulatâ, nigro-punctatâ, spiralliter, teniter, distanter, infra angulum validè sulcatâ; aperturâ castaneâ, columellâ brevi, latè truncatâ, prope suturam validè callusâ; labro intus distanter et validè denticulato-lirato.*

THE ENAMELLED PLANAXIS. Shell thick, short, whitish, clouded, and banded with blue and brown, smooth; whorls six to seven, the last ventricose, roundly angular below the middle, and narrowly at the suture; black-spotted, spirally, finely, distantly grooved, strongly below the angle; aperture chestnut, columella short, broadly truncated, with a strong callus near the suture,

outer lip distantly and strongly tooth-ridged within.

SMITH. Proc. Zool. Soc. 1872, p. 38.

Hab. Arracan.

In the specimens from which the description was taken (no others being known) the upper whorls are much corroded, and the body whorl being smooth, with spiral grooves almost obsolete above, gives the remaining surface a sort of enamelled appearance.

Species 2. (Mus. Brit.)

PLANAXIS CASTANEUS. *Pla. testâ subpyriformi, levigati, castaneâ, spiralliter teniter striatâ, longitudinaliter obliquè sublicatâ; spira elevatâ, acuminatâ, anfractibus senis, convergentibus; ultimo bulbiformi, aperturâ parvâ, labro intus 7-denticulatâ, marginem tenâ, columellâ subarcuatâ, infra subexpansâ.*

THE CHESTNUT PLANAXIS. Shell somewhat pyriform, smooth, chestnut, spirally finely striated, longitudinally obliquely slightly ridged; spire raised, acuminate, whorls six, rather convex; end bulb-shaped, aperture small, outer lip seven-toothed within, margin thin, columella slightly arched, rather expanded below.

SMITH. Proc. Zool. Soc. 1872, p. 41.

Hab. —?

Species 3. (Mus. Brit.)

PLANAXIS CRASSISPIRA. *Pla. testâ oblongâ, subdistanter spiralliter sulcatâ, griseâ, nigro-punctatâ; spira elevatâ, crassâ, subcylindricâ, obtusâ; anfractu ultimo obtusè angulatâ, aperturâ parvâ, subtriangulâ, columellâ albâ, infra latè productâ, labro intus validè denticulato.*

THE THICK-SPIRED PLANAXIS. Shell oblong, rather distantly spirally grooved, grey, spotted with black; spire elevated, thick, subcylindrical, obtuse; last whorl obtusely angular; aperture small, subtriangular, columella white, broadly produced below; outer lip strongly toothed within.

SMITH. Proc. Zool. Soc. 1872, p. 39.

Hab. —?

Differing from *Planaxis sulcatus* in the narrow, straight-sided form.

Species 4. (Fig. a, b, c, Mus. Hanley.)

PLANAXIS SULCATUS. *Pla. testâ trochiformi, crassâ, profundè sulcatâ, fuscâ-rubescens, nigro alboque maculatâ, costis prominentibus; spirâ conicâ, anfractibus quinis, ultimo magno, infra medium obscurè angulatâ; aperturâ subtrigona, columellâ rectiusculâ, latâ, ad suturam valdè callosâ et emulicatâ; labro intus validè limbo-denticulatâ, margine crenulatâ.*

THE GROOVED PLANAXIS. Shell trochus-shaped, thick, deeply-grooved, spotted with reddish-brown, black and white, ribs prominent; spire conical; whorls five, last large, obscurely angular below the middle; aperture subtrigonal, columella rather straight, broad, with a strong callosity and a canal at the suture; outer lip strongly toothed within, margin crenulated.

BOER. (Buccinum) Mus. Vindob. p. 258, Pl. X. f. 5, 6.

Planaxis buccinoides. Deshayes.

Planaxis undulata. Lamarck.

Buccinum pyramidale. Lamarck.

Hab. Australia, Philippines, Mauritius, South Africa.

Species 5. (Mus. Brit.)

PLANAXIS OBSCURUS. *Pla. testâ angustè pyramidatâ, profundè et crebriè sulcatâ, griseâ, maculatâ; spirâ elevatâ, anfractibus quinis, aperturâ breviusculâ, canali postico latâ, columellâ arcuatâ, ad terminum acutè truncatâ; labro intus validè denticulatâ, margine tenui, subflexuoso.*

THE OBSCURE PLANAXIS. Shell narrowly pyramidal, deeply and closely grooved, grey, spotted; spire elevated, whorls five; aperture rather short, sharply truncated; outer lip strongly toothed within, margin thin, rather flexuous.

A. ADAMS. Proc. Zool. Soc. 1851, p. 271.

Hab. — ?

The whorls are more straight-sided than in *Planaxis planicostata*, and the grooves narrower.

Species 6. (Mus. Brit.)

PLANAXIS PREVICULUS. *Pla. testâ breviter trochiformi, latâ, crassâ, spirâliter (infusè magis profundè)*

sulcatâ, griseo-brunneâ, nigro maculatâ; spirâ brevi, anfractibus quinis, ultimo maximo, infra medium obscurè angulatâ; aperturâ subtrigona, fuscâ, ad marginem nigro maculatâ, columellâ brevi, superne valdè callosâ, infra latâ, latè truncatâ, labro fusco, liris dentiformibus magnis.

THE SHORT LITTLE PLANAXIS. Shell shortly trochus-shaped, broad, thick, spirally-grooved (more deeply below), grey-brown, spotted with black; spire short, whorls five, last very large, obscurely angular; aperture subtrigonal, brown, black-spotted at the margin, columella short, with a strong callus above, broad below, broadly truncated, outer lip brown, with large tooth-shaped ridges.

DESHAYES. Mag. de Zool. 1844, Pl. CVIII.

Hab. Guam and New Guinea.

Broader and more finely grooved than *Planaxis sulcata*.

Species 7. (Mus. Hanley.)

PLANAXIS NUCLEUS. *Pla. testâ ovato-acuminatâ, nigro-fuscâ, prope suturam, infra medium et post marginem aperturâ profundè sulcatâ, medio lævigatâ; spirâ breviusculâ, acuminatâ; anfractibus brevibus, concaviusculis; aperturâ pyriformi, longiusculâ, valdè sinuè bicanaliculatâ, columellâ latissimâ, planulatâ, medio longitudinaliter sulcatâ, termino subrotundo; labio externo expanso, valdè crenulatâ.*

THE LITTLE NUT PLANAXIS. Shell ovate-acuminate, black-brown, deeply grooved near the suture, below the middle and behind the margin of the aperture, smooth in the middle; spire rather short, acuminate, whorls short, a little convex; aperture pyriform, rather long, strongly bicanaliculated, columella very broad, flattened, with a longitudinal groove in the middle, with rather round end; outer lip expanded, strongly crenulated.

LAMARCK. Anim. s. Vert. Vol. VII. p. 249.

Planaxis semisulcata. Sowerby.

Hab. West Indies, Jamaica.

The grooves, which are deep at the margins and lower part of the last whorl, are obsolete in the middle of the whorls.





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PLANAXIS.

PLATE II.

Species 8. (Mus. Hanley.)

PLANAXIS NIGRITELLUS. *Pla. testâ brunneo-nigrescenti; spirâ obtusâ, conicâ; anfractibus quinis, converci-
usculis, distanter sulcatis, ultimo magno, sulcis
medio subcanalibus; columellâ superâ callosâ,
arcuatâ; labro subpatulo, intus tenuiter lirato.*

THE LITTLE BLACK PLANAXIS. Shell blackish brown; spire obtuse, conical; whorls five, rather convex, distantly sulcated; last large, with the sulci nearly obsolete in the middle; columella callous above, arched; outer lip rather patulous, finely ridged within.

FORMES. (*Nigritella*.) Proc. Zool. Soc. 1850. Pl. II. f. 6.

Planaxis acutus. Menke.

Planaxis obsoletus. Menke.

The above name is given to the species by Mr. Smith on account of the name *acutus* being previously applied to another species.

Hab. Mazatlan.

Species 9. (Mus. Brit.)

PLANAXIS ACUTUS. *Pla. testâ brunneâ, acutâ pyrami-
datâ; anfractibus septenis, convercis, medio levigatis,
superâ infraque tenuiter sulcatis; aperturâ brevius-
culâ, latâ, subreductâ; columellâ latâ, labro intus
tenuiter lirato.*

THE ACUTE PLANAXIS. Shell brown, sharply pyramidal; whorls seven, convex, smooth in the middle, finely sulcated above and below; aperture rather short, broad, slightly blue; columella broad; outer lip finely ridged within.

KRAUSS. Südafrikanischen Mollusken. Tab. VI., f. 2. *Hab.* Natal.

Species 10. (Mus. Brit.)

PLANAXIS ATROPICURETUS. *Pla. testâ nigro-plumbeâ, oblongâ, obtusâ, levigatâ, anfractibus tribus, parum
convercis, ultimo infra sulcis tribus leviter sculptis;
aperturâ subtrigoniâ, castaneâ, labro intus levigato,
superâ subdepresso.*

THE PURPLE-BLACK PLANAXIS. Shell black-lead, oblong, obtuse, smooth, whorls three, rather convex, last lightly sculptured below with three grooves; aperture subtrigonal, brown; outer lip smooth within, slightly depressed above.

RECLUZ. Revue Zoologique, 1843, p. 261.

Planaxis Albersii. Dunker.

Hab. South Seas.

Species 11. (Mus. Hanley.)

PLANAXIS SIMILIS. *Pla. testâ subpyramidatâ, brunneâ, omnino subdistanter sulcatâ, sulcis prope suturam
et infra medium fortioribus; spirâ pyramidatâ,
acutâ; anfractibus septenis, superioribus
converciusculis; aperturâ purpurascenti, labro
crasso, intus dentato-lirato, callo labiali postico
distincto, parvo; rimâ angustâ.*

THE SIMILAR PLANAXIS. Shell rather pyramidal, brown, in every part rather distantly grooved; grooves stronger near the suture and below the middle; spire pyramidal, acuminate; whorls seven, upper rather convex; aperture purplish, lip thick, tooth-ridged within, posterior labial callus distinct, small; notch narrow.

SMITH. Proc. Zool. Soc. 1872, p. 41.

Hab. Sandwich Islands.

More conical than *Planaxis Hindei*, with less expanded aperture, thicker outer lip and nearly equal grooves in every part.

Species 12. (Mus. Hanley.)

PLANAXIS HANLEYI. *Pla. testâ subovatâ, brunneâ;
spirâ converco-conicâ; anfractibus senis, moderatè
convercis, apicalibus politis, ceteris superâ infraque
spiraliter sulcatis; ultimo magno, infra fortissimè
sulcato; aperturâ magnâ, patulâ; labro tenuius-
culo, intus tenuissime lirato, rimâ suturali sub-
rotundâ.*

HANLEY'S PLANAXIS. Shell subovate, brown; spire convexly conical; whorls six, moderately convex;

apical polished, others spirally grooved above and below; last large, very strongly grooved below; aperture large, patulous; outer lip very thin, very finely ridged within, sutural notch rather rounded.

SMITH. Proc. Zool. Soc. 1872.

Hab. Sandwich Islands.

Mr. Smith mentions as a variety a specimen in which the posterior callus and inflected edge of the outer lip almost meet, so as to form a rounded hole like that in *Papina*. I regard this as only a slight malformation. Yet the slit in this species is generally rounder than in *Planaxis similis*.

Species 13. (Mus. Hanley.)

PLANAXIS NIGER. *Pla. testâ nigra, acuto-pyramidata, spirâ acuminatâ, anfractibus senis, apicalibus albis, politis, ultimo magno, epidermide tenui, subviridi, infroâ angustè sulcato; aperturâ subtriangulâ, canali antico rotundo, canali postico lato; labro expanso, patulo, intus incrassato, tenuissimè crenulato.*

THE BLACK PLANAXIS. Shell black, ovately pyramidal, spire acuminate, whorls six, apical, white, polished, last large, covered with a greenish epidermis, narrowly grooved below; aperture rather trigonal, anterior canal rounded, posterior canal broad; outer lip expanded, patulous, thickened and very finely crenulated within.

QUOY. (*Nigra*.) Voyage de l'Astrolabe, p. 49.

Hab. New Ireland.

Species 14. (Mus. Hanley.)

PLANAXIS LAMOSUS. *Pla. testâ obliquè subpyramidata, grisâ, fasciis nigrescentibus, medio angustatis cinctâ, epidermide densè ciliatâ intus, anfractibus quinis, apicali acuto, ultimo maximo; aperturâ magna intus, prope marginem crassâ, levigatâ.*

THE LIPPED PLANAXIS. Shell obliquely subpyramidal, grey, and girt with blackish bands, narrow in the middle, covered with a thickly ciliated epidermis,

whorls five, apical sharp, last very large; aperture large, thick within, near the margin, smooth.

ADAMS (A.) Proc. Zool. Soc. 1851, p. 272.

Planaxis plumbea. Pease.

Planaxis Browni. Dunker.

Planaxis pediculus. Kusten.

Hab. Sandwich Islands.

Species 15. (Mus. Hanley.)

PLANAXIS CINGULATUS. *Pla. testâ acutè pyramidata, spirâliter crebrè sulcatâ; anfractibus septenis, superâ fuscâ latè fasciatis, medio angustè lineatis; aperturâ breviusculâ, purpurascenti, labio exterioris lico dentato, margine lineo-punctato; columella subumbilicata.*

THE BELTED PLANAXIS. Shell sharply pyramidal, spirally closely grooved; whorls seven, broadly banded above with brown, narrowly lined in the middle; aperture rather short, purplish, outer lip tooth-ridged within, margin line-spotted; columella subumbilicated.

ADAMS (Arthur). Proc. Zool. Soc. 1851, p. 271.

Hab. China Seas.

Species 16. (Mus. Hanley.)

PLANAXIS STRIATULUS. *Pla. testâ acuto-pyramidata; fulvâ, levigatâ, rubro spirâliter lineatâ; spirâ acuminatâ, conicâ; anfractibus senis; aperturâ breviusculâ, columellâ lubroque purpureis, labro intus incrassato, sic lico.*

THE STRIATED PLANAXIS. Shell pyramidal; fawn, smooth, spirally lined with red; spire acuminate, conical; whorls six; aperture rather short, columella and outer lip purple, outer lip thickened within, scarcely ridged.

PHILIPPI. Zeitschrift für Malak. 1851. p. 91.

Hab. — ?

The species is subject to some variation, one variety being nearly white and another (in the British Museum) with only a broad cerulean band in the middle of the whorls.





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PLANAXIS.

PLATE III.

Species 17. (Mus. Hanley.)

PLANAXIS SUTURALIS. *Pla. testā parvā, albā, crassiusculā, turrētā, pyramidalē, apice acuminatā; anfractibus septenis, suture crenatā separatis, spirāliter profundē sulcatis, superiōrē angulatis, inter suturas planatis, columellā superiōrē breviter callosā, canali postico brevī, aperturā brevī; labro crasso, dentibus internis liriformibus decem.*

THE SUTURAL PLANAXIS. Shell small, white, rather thick, turreted, pyramidal; apex acuminate; whorls seven, separated by a deep suture, spirally deeply grooved, angular above, flat between the grooves; columella shortly callous above, posterior canal short; aperture short; outer lip thick, inner ridge-shaped teeth ten.

SMITH. Proc. Zool. Soc. 1872.

Hab. Chinese Seas.

Species 18. (Mus. Brit.)

PLANAXIS ATER. *Pla. parvā, oblongo-pyramidalē, nigrā, obscurissimē fasciatā; spirā elongatā, conicā, anfractibus sexis, lateraliter subcomplanatis, ultimo majusculo; aperturā parvā, breviter subtrigonā, intus septem-liriatā; canali postico nulla.*

THE DARK PLANAXIS. Shell small, oblong-pyramidal, black, very obscurely banded; spire elongated, conical, whorls six, laterally rather flat, last rather large; aperture small, shortly subtrigonal, with seven internal ridges; no posterior canal.

PEASE. (*Atca*.) American Journ. of Conchology.

Hab. Marquesas Islands.

In the obscurity of the dark colouring, light interstices of dark lines can be traced; and the species somewhat resembles the more obscure varieties of *Planaxis lineata*.

Species 19. (Mus. Hanley.)

PLANAXIS ABBREVIATUS. *Pla. testā nigrā, levigatā, subovatā, brevī; spirā brevissimā, anfractibus quatuor, ultimo maximo, infra quinquesulcatō, aperturā parvā concavā, angulā, intus tenuiter liriatā, canali postico latiusculo.*

THE ABBREVIATED PLANAXIS. Shell black, smooth, subovate, short; spire very short, whorls four, last large, five-grooved below; aperture blackish-

purple, large, finely ridged within, posterior canal rather wide.

PEASE. (*Abbreviata*.) Proc. Zool. Soc. 1855, p. 515.

Hab. Sandwich Islands.

Considerably shorter in the spire than *Planaxis niger* of Gaoy, which it otherwise much resembles.

Species 20. (Mus. Hanley.)

PLANAXIS LINEATUS. *Pla. testā parvā, oblongo-pyramidalē, fulvā vel griseā, varīē spirāliter rubro vel nigro spirāliter lineatā et fasciatā, spirā elongatā, acuminatā, anfractibus sexis ad septenis, quatuor primis sulcato-liratis; aperturā brevī, subtrigonā, intus distanter denticulolatā, canali postico nulla.*

THE LINEATED PLANAXIS. Shell small, oblong-pyramidal, fulvous or grey, variously spirally lined and banded; spire elongated, acuminate, whorls six or seven, first four groove-ridged; aperture short, subtrigonal, distantly tooth-ridged within, no posterior canal.

COSTA. (*Buccinum*.) Brit. Conch. p. 130.

Buccinum pelindare. Lamarck.

Hab. West Indies.

This well-known West Indian shell was first described by Da Costa as British. A foreign specimen must have come into his hands by mistake.

Species 21. (Mus. Hanley.)

PLANAXIS SUCCINCTUS. *Pla. testā parvā, ovato-pyramidalē, fulvā subdistanter tenuiter rubro-lineatā; spirā subelevatā, acuminatā; anfractibus sexis, concentricis, superioribus lirato-sulcatis; aperturā brevissimā, latā, intus liriatā, canali postico nulla.*

THE LINE-GIRT PLANAXIS. Shell small, ovately pyramidal, fulvous, rather distantly, finely red-lined; spire slightly elevated, acuminate; whorls six, rather convex, upper groove-ridged; aperture rather short, broad, ridged within; no posterior canal.

A. ADAMS. Proc. Zool. Soc. 1851, p. 272.

Hab. West Indies.

The lines are thinner and more distant, the whorls are more rounded and the spire is shorter in pro-

PLANAXIS.—PLATE III.

portion to the aperture than in *Planaxis lineatus*. Yet the variations in individuals is such that the two species are determined with difficulty.

Species 22. (Mus. — ? Copied)

PLANAXIS HERMANNSEN. *Testâ parvâ, solidâ, ovato-oblongâ, atro-fuscâ, lineis fulvis cinctâ; spirâ acuminatâ, anfractibus senis, convexis, apicalibus sulcatis, ultimo infrâ sulcato, ventricoso; caudâ post columellam umbilicatâ; aperturâ ovatâ, patulâ, albâ, lineatâ, intâs incrassatâ, liratâ.*

HERMANNSEN'S PLANAXIS. Shell small, solid, ovately oblong, black-brown, girt with fulvous lines; spire acuminate; whorls six, convex, apical, grooved, last grooved below, ventricose, cauda umbilicated behind the columella; aperture ovate, patulous; white, lineated, thickened within, ridged.

DUNKER. Ind. Moll. p. 16. Pl. II. f. 33.

Hub. Benguela.

Species 23. (Mus. Brit.—Hanley.)

PLANAXIS VARIABILIS. *Pla. testâ parvâ, elongatâ, albâ, lineis spiralibus rubescentibus ornatâ, spirâ conicâ, rectilaterâ, acuminatâ; anfractibus superioribus sulcatis, ultimo suprâ infrâque validâ, medio leviter sulcato; aperturâ parvâ, brevî; columellâ infrâ brunneo tinctâ, collo canalique posticis nullis.*

THE VARIABLE PLANAXIS. Shell small, elongated, white, ornamented with spiral reddish lines, spire conical, straight-sided, acuminate; upper whorls grooved, last grooved strongly above and below, slightly in the middle; aperture small, short; columella tinged with brown below; no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 44.

Hub. Fiji Islands. Var. China Seas.

Figure *b* represents the variety in the Collection of Sylvanus Hanley, Esq.

Species 24. (Mus. Brit.)

PLANAXIS VIRGATUS. *Pla. testâ elongatâ, fuscâ, lineis spiralibus paucis, et strigis longitudinalibus irregularibus ornatâ; spirâ acuminatim productâ; anfractibus octonis, convexiusculis, superioribus sulcatis, ultimo infrâ sulcato; aperturâ subovatâ, parvâ; labro acutè marginato; intâs incrassato, denticulato; collo canalique posticis nullis.*

THE STRIPED PLANAXIS. Shell elongated, fulvous, ornamented with few spiral lines and longitudinal irregular stripes, spire acuminate produced; whorls eight, rather convex, upper grooved, last grooved below; aperture subovate, small; outer lip sharp-edged; thickened within, denticulated; no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872, p. 44.

Hub. Fiji Islands.

Species 25. (Mus. Hanley.)

PLANAXIS STRIGATUS. *Pla. testâ parvâ, albâ, solidâ, spiraliter distanter rubro-lineatâ; spirâ acuminatâ, anfractibus novenis, superioribus sulcatis, penultimo tenuiter striato; ultimo infrâ sulcato; aperturâ spiram longitudine æquantî; columellâ labroque albis vel pullidè violaceis; labro intâs incrassato, denticulato, margine acuto.*

THE STREAKED PLANAXIS. Shell small, white, solid; spirally distantly red-lined; spire acuminate, whorls nine, upper grooved, last finely striated; last grooved below; aperture equalling spire in length; columella and lip white or pale violet, outer lip thickened within, denticulated, margin sharp.

HANLEY. MS. in Coll.

Hub. Pacific.

Neither the *P. virgatus* var. so marked in the British Museum, nor the "*strigatus* var." in Mr. Hanley's Collection seem to me to agree with the type of Mr. Smith's *P. virgatus*, but resemble each other, with the exception that the former has a little purple in the lips.



27



26a



28



26b



29a



29b



30a



31



30b



32

PLANAXIS.

PLATE IV.

Species 26. (Mus. Hanley.)

PLANAXIS PLANICOSTATUS. *Pla. testā trochiformi, magnā, solidā, fuscā, epidermide tenuiter rugatā indurā, costis planatis latis cinctā, interstitiis profundis; spirā conicā, anfractibus septenis ad suturam angustā angulatis; suturā profundā, ultimo magno, infra medium obscurissimē angulato; aperturā subtrigoniā, columellā latē planatā, collo postico intrinso, labro ad marginem tenui, crenulato, superiōre depresso, intus liris dentiformibus septenis armato, canali postico angusto elongato.*

THE FLAT-RIBBED PLANAXIS. Shell trochus-shaped, large, solid, brown, covered with a finely wrinkled epidermis, girt with flat, broad ribs; interstices deep; spire conical, whorls seven, narrowly angular at the suture; suture deep; last large, very obscurely angular below the middle; aperture subtrigonal, columella broadly flattened, posterior callus very large, outer lip thin, crenulated at the margin, depressed above, strengthened within with seven tooth-like ridges; posterior canal narrow, elongated.

SOWERBY. Append. Tank. Cal. p. 13. 1825.

Planaxis costulenta Daal.

Planaxis circumata, Lessen.

Hab. Galapagos Island and Panama.

Species 27. (Mus. Hanley.)

PLANAXIS TENUIS. *Pla. testā tenui, elongatā, politā, semipellucidā, albidā, lineis rubris paucis distantibus cinctā; spirā elongatā; anfractibus octonis, convexiusculis, spirāliter breviter sulcatis, ultimo elongato, infra rudē sulcato et ventricoso; aperturā brevī, angustā, labro tenui, collo canaliculo postico nullis.*

THE THIN PLANAXIS. Shell thin, elongated, polished, semipellucid, whitish, girt with few distant red lines; spire elongated; whorls eight, rather

convex, spirally lightly grooved, last elongated, strongly grooved and ventricose below the middle, aperture short, narrow, outer lip thin, no posterior callus or canal.

SMITH. Proc. Zool. Soc. 1872. p. 45.

Hab. —?

Species 28. (Mus. Brit.)

PLANAXIS INEPTUS. *Pla. testā parvā, pallidissimē fulvā, supra suturam rubro lineatā, spirāliter sulcatā; spirā elongatā, anfractibus septenis, convexiusculis, ultimo ventricoso, medio bilineato; aperturā brevī, subrotundā.*

THE UNIMPORTANT PLANAXIS. Shell small, very pale fulvous, with a red line above the suture, spirally grooved; spire elongated, whorls seven, rather convex; last ventricose, with two lines in the middle; aperture short, rather rounded.

GOULD. (*Inepta*.) Proc. Boston. Soc. Nat. Hist. 1860.

Hab. Kikaia Bay.

Species 29. (Fig. a, b, Mus. Brit.)

PLANAXIS ZONATUS. *Pla. testā parvā, politā, solidā, albidā, supra suturam et medio infusque anfractibus ultimi lineā rubrā cinctā; anfractibus septenis, ultimo subventricoso; aperturā latā, brevī; labro prope marginem incrassato, denticulato.*

THE Banded PLANAXIS. Shell small, polished, solid, whitish, girt with a red line above the suture and in the middle and below the middle of the last whorl; whorls seven, last rather ventricose; aperture broad, short; outer lip thickened near the margin, denticulated.

A. ADAMS. Proc. Zool. Soc. 1851, p. 271.

Hab. Calapan, Philippines.

Species 30. (Fig. a, b, Mus. Hanley.)

PLANAXIS SAVIGNYI. *Pla. testā magnā, crassā, breviter trochiformi, infra medium subangulatā, omnibus*

PLANAXIS.—PLATE IV.

crebrè sulcatà, griseo-fusca; strigis numerosis angustis, undulatis, longitudinalibus ornata; spirà brevi; anfractibus quinis, brevibus, convexiusculis; ultimo magni, supra medium tumidiüsculo; aperturà subtrigona, labro intus calidè dentato, lirato, margine fusco, tenui, crenato, columellà breviusculà, callo postico conspicuo.

SAVIGNY'S PLANAXIS. Shell large, thick, shortly trochiform, slightly angular below the middle, numerously grooved all over, grey brown, ornamented with numerous narrow undulating longitudinal stripes; spire short; whorls five, short, rather convex; last large, rather tumid above the middle, aperture rather trigonal; outer lip strongly tooth-ridged within, margin broad, thin, crenated, columella rather short; posterior callus conspicuous.

DESHAYES. Mag. Zool. 1844. Pl. CIX.

Hab. Red Sea.

The sulci are more numerous than in *Planaxis sulcatus*, and not deeply cut.

Species 31. (Mus. Brit.)

PLANAXIS LINEOLATUS. *Pla. testà parvâ, densè spiraliter sulcatâ, rubro lineatâ, subventricosâ, spirâ acuminatâ, anfractibus convexiusculis; aperturâ subrotundâ, columellâ tenui, calidè arcuatâ, labro intus denticulato, prope marginem incrassato, margine rotundo,*

THE FINE-LINED PLANAXIS. Shell small, closely spirally grooved, lined with red, rather ventricose; spire acuminate, whorls rather convex; aperture rather round, columella thin, much arched, outer lip denticulated within, thickened near the margin, margin rounded.

GOULD. Otia Conch. p. 60.

Hab. Wilson's Island, near the Sandwich Islands.

Species 32. (Mus. Hanley.)

PLANAXIS LONGISPIRA. *Pla. testâ parvâ, elongatâ, angustâ, albidâ, medio ultimi anfractûs et infra rubro bilineatâ; spirâ productâ, anfractibus convexiusculis, levibus, politis, ultimo basi sulcato; aperturâ parvâ, quam spira longe breviori; columellâ brevi, arcuatâ, pallidè violaceâ; labro crassiusculo, callo postico nullo.*

THE LONG-SPIRED PLANAXIS. Shell small, elongated, narrow, whitish, with two red lines in the middle of the last whorl and below; spire produced, whorls rather convex, smooth, polished; last grooved at the base; aperture small, much shorter than spire; columella short, arched, pale violet; outer lip rather thick; no posterior callus.

SMITH. Proc. Zool. Soc. 1872, p. 45.

Hab. Chinese Seas.





32 a.



33



34 b.



35 a.



35 b.



36 b.



37 a.



37 b.



38 a.



38 b.

PLANAXIS.

PLATE V.

Species 33. (Mus. Brit.)

PLANAXIS EBOREUS. *Pla. testā albā, parvā, ovato-
acuminatā, ad apicem fuscā; spirā elevatā,
mucronatā; anfractibus octonis, inferioribus con-
vexis, spirāliter sulcatis, costis latiusculis denticulatis;
apertura subovatā; labro ad marginem acuto,
hemisphaerulato, intus incrassato, denticulato;
columnellā arcuatā, callo postico parvo.*

THE IVORY PLANAXIS. Shell white, small, ovately
acuminated, fulvous at the apex; spire raised,
mucronated; whorls eight, lower convex, spirally
grooved, ribs between the grooves divided; aper-
ture subovate, outer lip sharp at the margin,
spotted with brown, thickened and denticulated
within; columella arched, posterior callus small.

SMITH. Proc. Zool. Soc. 1872, p. 42.

Hab. St. Thomas and St. Vincent, West Indies.

The ribs are divided by a spiral line in the centre.

Species 34. (Fig. a, b, Mus. Brit.)

PLANAXIS PUNCTO-STRIATUS. *Pla. testā angustē pyra-
midatā, lineis minutissimē puncto-striatis spirāliter
cinctā, brevi, pallidē fuscā, areolis parvis sub-
quadratis costarum scutatum dispositis ornati;
spirā elongatā, anfractibus senis, convexiusculis,
ultimo subcylindrico; apertura brevis, subovatā,
anticē calicē emarginatā, margine labii maculato.*

THE PUNCTURE-STRIPED PLANAXIS. Shell narrowly
pyramidal, spirally encircled with very minute
puncture-striated lines, smooth, pale fulvous,
ornamented with small square chestnut spots;
spire elongated, whorls six, rather convex, last
rather ventricose; aperture short, subovate, an-
teriorly strongly notched, margin of the outer
lip spotted.

SMITH. MS. Mus. Brit.

Hab. —?

Species 35. (Fig. a, b, Mus. Hanley.)

PLANAXIS BRASILIENSIS. *Pla. testā elongato-pyrami-
dalis, brevis, albā, crassissimā, epidermide pilosā
intus; spirā elevatā, anfractibus septenis, supe-*

*rioribus frequenter griseo fuscatis, ultimo infra
medianā obtusē angulatā; apertura parvā, ovatā,
fuscā; labro ad dorsum tumido, supra margine
d-flexo, intus calicē incrassato denticulato; columellā
brevis, incrassatā, arcuatā, anticē productā, canali
antico elongato, costis tumidis.*

THE BRAZILIAN PLANAXIS. Shell elongate-pyramidal,
smooth, white, very thick, covered with a vel-
vety epidermis; spire raised, whorls seven, upper
often banded with grey, last obtusely angular
below the middle; aperture small, ovate, fulvous,
outer lip tumid at the back, bent down above
the margin, much thickened and denticulated
within; columella short, thickened, arched,
produced anteriorly, anterior canal lengthened,
tumid outside.

LAMARCK. (Buccinum.) Anim. s. Vert. Vol. VII. p. 272.

Planaxis mollis. Sowerby.

Buccinum levigatum. Wood.

Planaxis fulva. A. Adams.

Planaxis pigra. Forbes.

Hab. Brazil.

Species 36. (Fig. a, b, Mus. Hanley and Brit.)

PLANAXIS (Quoyia) MICHAUDI. *Pla. testā pyrami-
datā, elevatā, levigatā, fuscā, fulvā vel griseo
longitudinaliter fasciatā; spirā elongatā, conicā;
anfractibus septenis, convexiusculis, ultimo infra
medianā angulatā, super varicem canalis leviter
spirāliter striatā; apertura brevis, subtriangulā,
columnellā superne quadratim exsertā, acutē ni-
dentatā, ad terminum truncatā; labro intus tenuiter
lineato-denticulato; canali antico brevis, obtuso.*

MICHAUD'S PLANAXIS. Shell pyramidal, raised, smooth,
brown, longitudinally striped with fawn or grey;
spire elongated, conical; whorls seven, rather
convex, last angular below the middle, lightly
spirally striated above the varix of the canal;
aperture short, subtriangular, columella cut out in
a square above, with a sharp tooth, truncated at
the end; outer lip finely ridge-toothed; anterior
canal short, round.

CROSSE and FISCHER. Journ. Conch. Vol. XI. p. 375.

Hab. Eastern Seas.

PLANAXIS.—PLATE V.

The variety in the British Museum is banded longitudinally with light grey, and that in M. Hanley's collection is of a more uniform brown colour. The shell is more slender than *Quoyia decollata*, which is deeply grooved.

Species 37. (Fig. a, b. Mus. Hanley.)

PLANAXIS (Quoyia) DECOLLATA. *Pla. testâ oblongo-pyramidalâ, spiraliâ validè sulcatâ, subcervicè fuscâ, fusco longitudinaliter strigatâ, sulcis prope suturam et supra caricem canalis majoribus; angustibus lateraliter retiusculis, superioribus deciduis; aperturâ brevi, subtriangulâ, columellâ superâ quadratâ excisâ, acutè indentatâ, ad byssinam truncatâ; labro intus tenuiter lirato-denticulatâ; exili notica brevi, robusto.*

THE DECOLLATED PLANAXIS. Shell oblong-pyramidal, spirally strongly grooved, greenish-fawn, longitudinally striped with brown, grooves larger near the suture and above the canal varix; whorls laterally rather straight, upper deciduous;

aperture short, rather trigonal, columella cut out above in a square, with a sharp tooth; anterior canal short, rounded.

GRAY. Proc. Zool. Soc. 1847, p. 138.

Hab. New Guinea, Philippines.

Species 38. (Mus. Brit.)

PLANAXIS (Holcostoma) PILIGER. *Pla. testâ ovatâ, brevi, latè plumbeo fuscâ; spirâ brevissimâ; aperturâ magnâ, ovatâ, canali postico elongato, sinuato, columellâ arcuatâ, infusâ latâ, latè truncatâ, labro intus leviter dentato, margine superâ flexuoso.*

THE HAIRY PLANAXIS. Shell ovate, smooth, broadly banded with plum-colour; spire very short; aperture large, oval, posterior canal elongated, sinuous, columella arched, broad below, broadly truncated, outer lip lightly toothed, margin flexuous above.

PHILIPPI. Zeitschrift für Malak. 1848, p. 164.

Holcostoma setigerum. A. Adams.

Hab. Mauritius.

PLANAXIS.

	Plate.	Species.		Plate.	Species.
abbreviatus, <i>Pease</i>	III.	19	<i>Menckanus</i> , Dunker. Not identified.		
acutus, <i>Krauss</i>	II.	9	<i>Michaudi</i> , <i>Crosse</i> and <i>Fischer</i>	V.	36
acutus, Menke	II.	8	<i>Mollis</i> , Sowerby	V.	35
<i>Albersii</i> , Dunker	II.	10	nucleus, Lamarek	I.	7
areolatus, A. Adams. Not identified.			<i>Nicolariensis</i> , Zeebor. Not identified.		
ater, <i>Pease</i>	III.	18	niger, Quoy	II.	13
atropurpureus, <i>Reebuz</i>	II.	10	nigritellus, <i>Forbes</i>	II.	8
Brasilianus, <i>Lavater</i>	V.	35	obscurus, A. Adams	I.	5
breviculus, <i>Deshayes</i>	I.	6	obsoletus, Menke	II.	8
brevis, Quoy. Not identified.			pedicularis, Lamarek	III.	20
Bronni, Dunker	II.	14	pediculus, Kuster (?)	II.	14
Buccineus, A. Adams. Not identified.			pigra, Forbes	V.	35
buccinoides, <i>Deshayes</i>	I.	4	piliger, <i>Philippi</i>	V.	38
canaliculata, Duval	IV.	26	planicostata, Sowerby	IV.	26
castaneus, <i>Smith</i>	I.	2	plumbea, <i>Pease</i>	II.	14
cingulatus, Adams	II.	15	puncto-striatus, <i>Smith</i>	V.	34
circinata, Lesson	IV.	26	pyramidalis, Lamarek	I.	4
crassispira, <i>Smith</i>	I.	3	Savignyi, <i>Deshayes</i>	IV.	30
decollata, <i>Gray</i>	V.	37	semisulcata, Sowerby	I.	7
eboreus, <i>Smith</i>	V.	33	setigerum, A. Adams	V.	38
encumstiens, <i>Smith</i>	I.	1	similis, <i>Smith</i>	II.	11
fasciatus, <i>Pease</i> . Not identified.			striatulus, <i>Philippi</i>	II.	16
fulva, A. Adams	V.	35	strigatus, <i>Hanley</i>	III.	25
Gouldii, Smith. Not identified.			succinctus, A. Adams	III.	21
Hanleyi, <i>Smith</i>	II.	12	sulcatus, <i>Boyd</i>	I.	1
Hermannseni, Dunker	III.	22	suturalis, <i>Smith</i>	III.	17
jacius, <i>Philippi</i> . Not identified.			toniatus, <i>Philippi</i> . Not identified.		
ineptus, <i>Gould</i>	IV.	28	tennis, <i>Smith</i>	IV.	27
labiosus, Adams	II.	14	undulata, Lamarek	I.	4
levigatum, Wood	V.	35	variabilis, <i>Smith</i>	III.	23
lineatus, <i>Costa</i>	III.	20	virgatus, <i>Smith</i>	III.	21
lineolatus, <i>Gould</i>	IV.	31	zonatus, A. Adams	IV.	29
longispira, <i>Smith</i>	IV.	32			

MONOGRAPH
OF THE GENUS
VELORITA.

Thou jubilant abyss of ocean cry,

Alleluia !

Ye tracts of earth and continents reply,

Alleluia ! — *Neale*



1. a



2. a



3. a



4. a



5. b

VELORITA.

Genus VELORITA, Gray.

MOLLUSCUM ACÉPHALOPODUM, BIMUSCULOSUM, FLUVIATILE.

Testa crassa, solidi, æquivalvi, epidermide crassa, nitenti indurâ; umbonibus a cardine separatis; cardine crasso, utroque valvi dentibus tribus cardinalibus divergentibus; dentibus lateralibus, antico breviusculo, angulato, postico elongato. Valli impressio posticæ angulatinæ sinuosa. Ligamentum externum, magnum.

MOLLUSC ACÉPHALOPODUS, BIMUSCULAR, FLUVIATILE.

Shell thick, solid, equivalve, covered with a thick, shining epidermis; umbones separated from hinge. Hinge thick, with three diverging cardinal teeth in each valve; lateral teeth, anterior rather short, angular, posterior elongated. Impression of the mantle posteriorly, angularly sinuated. Ligament external, large.

The two species described are from Japan and Cochin, in India. The former is the well-known *Velorita cyprinoides*, and the latter recently described by Mr. Smith of the British Museum. We are unacquainted with the so-called *Velorita recurvata* of Valenciennes. The solidity of the shell, the very peculiarly angular front lateral tooth, and the separation by a small area of the umbones, are the characteristics of the genus.

Species 1. (Mus. Sowerby.)

VELORITA CYPRINOIDES. *Vel. testâ altissimâ, solidissimâ, tumidissimâ, valdè obliquâ, liris concentricis distantibus, plerumque ad latera continuis rugatâ, intus albiâ, vel roseo violaceoque tinctâ; latere antico brevissimo, perpendiculari, infra umbones areâ subrotundâ, planulatâ; latere postico producto, infra acuminato, angulato, subcarinato, post angulum planulatâ.*

THE CYPRINA-LIKE VELORITA. Shell very high, very solid, very tumid, very oblique, wrinkled with distant concentric ridges, for the most part continued to the sides, white, or tinged with rose or violet within; anterior side very short, perpendicular, with a rather rounded, flattened area; posterior side produced, acuminate below, angular, slightly keeled, flattened behind the angle.

GRAY. —? MS. Brit. Mus.

Hab. Japan.

Species 2. (Mus. Brit.)

VELORITA COCHINENSIS. *Vel. testâ subovatâ, latâ, obliquâ, subcompressâ, liris concentricis distantibus, plerumque posticè post medium discontinuis rugatâ, intus salmonè et aurantiâ; latere antico brevi, fere perpendiculari, infra umbones planulatâ; latere postico obliquè producto, vix carinato, angulato, post angulum planulato, ad terminum subtruncato.*

THE COCHIN VELORITA. Shell subovate, broad, oblique, subcompressed, wrinkled with distant concentric ridges, for the most part discontinued posteriorly behind the middle, salmon and orange within; posterior side obliquely produced, hardly keeled, angular, flattened behind the angle, truncated behind the middle.

HANLEY, Smith, Proc. Zool. Soc. 1875.

Hab. Cochin, Kinderpore, Madras.

The differences between this and the former species, consisting in the greater breadth and less elevated apex of the latter, the tendency of its wrinkles to stop near the anterior half of the shell, are more comparative than positive, and, in a number of specimens, some are found in which these characters are almost interchangeable.

MONOGRAPH

OF THE GENUS

P T E R O P O D A.

We float upon a wild and violent sea, each way, and move.

Shakspeare.



2



1a.



3



4a



5a



5b



11.



c



7



1b.

PTEROPODA.

PLATE I.

Genus HYALÆA. Lamarck.

Testa hyalina, tenuissimâ, subglobosa, lateraliter appendiculata, symmetrica; apice nonspirali; aperturâ angustâ, lateraliter incisâ; labro marginato, plerumque in rostrum producto.

Shell glassy, very thin, subglobose, with lateral appendages, symmetrical; apex non-spiral; aperture narrow, laterally incised; outer lip bordered, generally produced into a beak.

SYNONYM. *Carolina* Giardi.

The Pteropoda are placed by authors, who have studied their peculiarities, between the Cephalopoda and the Gasteropoda. The name of the class is happily chosen to suggest the wing-like pair of flappers or fins which, placed on each side of the head, effect by their action the locomotion of the mollusc. The greater part of the species are common to all seas; a few being perhaps peculiar to the Atlantic, and a few to the Pacific. They can be seen in the evening or at night floating at the surface of the water in great numbers, but at sunrise they sink to various depths, and are seen no more till the luminary of day disappears from the horizon. It is said that each species has its own precise moment for retiring, and its own appointed depth to which to sink.

The shells of some of the genera are obliquely spiral; as *Hemifusus* and *Chelitropis*. Some are symmetrically spiral. Some have an operculum. *Cymbulia*, a boat-shaped symmetrical cartilage, but no shell. The form of the shell in *Hyalæa* bears a considerable resemblance to a symmetrical bivalve shell with the valves soldered together at the dorsal hinge.

Species 1. (Mus. Brit.)

HYALÆA UNCINATA. *Hya, testâ tenuissimâ, succineâ, tumidâ, posticè trispinosa, spinis lateralibus trigonis, acutis, spinâ terminali deflexâ, uncinatâ; aperturâ angustâsculâ, labro angustè marginato, medio paulo producto.*

THE HOOKED HYALÆA. Shell very thin, amber,

tumid, posteriorly three-spined, lateral spines three-sided, sharp terminal spine bent downwards, curved; aperture rather narrow, outer lip narrowly bordered, a little produced in the middle.

RANG. D'Orbigny. Voy. Amér. Mériid. Pl. V. f. 11-15.
Hab. Atlantic Ocean.

Distinguished from *Hyalæa trispinosa* by the more pent-up form, and by the hooked character of the central spine.

Species 2. (Mus. — ? Copied.)

HYALÆA FLAVA. *Hya, testâ flavidâ, tenuissimâ, ovatâ, subcompressâ, posticè trispinosâ, spinis lateralibus subapproximatis, spinâ centrali elongatâ, aperturâ angustâ, labro bilobato.*

THE YELLOW HYALÆA. Shell flavid, very thin, oval, subcompressed, three-spined posteriorly; lateral spines rather approximate, central spine long; aperture narrow, outer lip bilobate.

D'ORBIGNY. Voy. Amér. Mériid. Pl. V. f. 21-25.
Hab. Atlantic Ocean.

Distinguished from *Hyalæa trispinosa* by its oval and more compressed form.

Species 3. (Mus. Brit.)

HYALÆA AFFINIS. *Hya, testâ densè fuscâ, quam H. tridentata angustiorâ, magis rotundâ, rostro aperturæ producto, bilobato.*

THE RELATED HYALÆA. Shell deep brown, narrower than *Hyalæa tridentata*, the rostrum of the mouth produced, bilobate.

D'ORBIGNY. Voy. Amér. Mériid. Pl. V. f. 6-10.
Hab. Atlantic Ocean.

By the character of the shell alone the species would scarcely be distinguishable from the common species, and for this reason the writer has confined himself to the above very short comparative description.

PTEROPODA.—PLATE I.

Species 4. (Mus. Brit. &c.)

HYALEA TRIDENTATA. *Hy. testâ intensè fuscâ, tenui, infra pallidiori, posticè acutè trispinosâ; spinis lateralibus alaeformibus, spinâ terminali rectâ, disco inferiori subtrigono, aperturam versus divaricatim subtrilobato; disco superiori globoso, ad latera marginato; aperturâ trigonâ, lubro rostrato, margine subquadrilobato.*

THE THREE-SPINED HYALEA. Shell deep brown, thin, rather paler underneath, posteriorly sharply three-spined, lateral spines wing-shaped, terminal spine straight, lower disc subtrigonal to subtrilobate towards the aperture; upper disc globose, bordered at the sides; aperture trigonal, outer lip beaked, margin slightly four-lobed.

FORSKAL (Cavolina).

Hyalea papilionacea. Bory St. Vincent.

Hyalea Forskalii. D'Orbigny.

Hyalera Pungii. Deshayes.

Hab. Mediterranean. Great Britain?

It is probable that the variety, fig. 6, with white border and appendages, may be the *H. papilionacea* of St. Vincent.

Species 5. (Mus. Brit.)

HYALEA CUMINGII. *Hy. testâ trispinosâ, pallidâ, tenuissimâ, iridescenti, vobulosâ, vel pallidè succineâ, quam H. trispinosa magis oblongâ, spinis lateralibus magis approximatis, rostro subtrigono, producto.*

CUMING'S HYALEA. Shell three-spined, pale, very thin, iridescent, clouded, or pale amber, more oblong than *Helix trispinosa*, lateral spines more approximated, beak subtrigonal, produced.

DESHAYES. MS. Mus. Cuming.

Hyalea vobulosa. Deshayes (var.)

Hab. —?

Of a more oblong form and lighter texture than *H. trispinosa*, but the difference is not very obvious. There is something in the texture of the pale variety

giving a cloudy iridescence, which may, however, indicate a real specific distinction.

Species 6. (Fig. a, b, Mus. Brit.)

HYALEA GLOBULOSA. *Hy. testâ trispinosâ, ovatâ, ventricosâ, albâ, angustiusculâ, disco ventrali obliquè conico, ad apicem rotundè elevato, spinis lateralibus obtusis, subapproximatis, spinâ apicali deflexâ, truncatâ, perforatâ; aperturâ angustè semilunari, labro breviter marginato.*

THE GLOBOSE HYALEA. Shell three-spined, ovate, ventricose, white, rather narrow; ventral disc obliquely conical, roundly raised at the apex, lateral spines obtuse, somewhat approximate, apical spine bent downwards, truncated, perforated; aperture narrowly semilunar, outer lip shortly margined.

RANG. Proc. Zool. Soc.

Hab. —?

Species 7. (Fig. a, b, Mus. Brit.)

HYALEA GIBBOSA. *Hy. testâ trispinosâ, ovatâ, ventricosâ, albâ, angustiusculâ, elongatâ, disco ventrali obliquè conico, acuminatim elevatâ, ad angulum elevatum rugatâ; spinis lateralibus approximatis, spinâ centrali elongatâ, leviter deflexâ.*

THE GIBBOUS HYALEA. Shell three-spined, ovate, ventricose, white, rather narrow, elongated; ventral disc obliquely conical, acuminately elevated, wrinkled at the raised angle; lateral spines approximated, central spine elongated, slightly deflected.

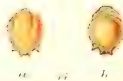
RANG. D'Orbigny, Voy. Amér. Mèrid.

Hab. —?

This and the preceding species are swelled and raised at the ventral disc, forming an oblique cone, leaning towards the aperture in each case. In *Hyalea globulosa* the apex of the cone is rounded. In *H. gibbosa* it is raised into an acuminately strongly-wrinkled beak.

Pteropoda Pl. II.

(*Hyalæa*)



PTEROPODA.

PLATE II.

HYALÆA.

Species 8. (Fig. a, b, Mus. Sowerby.)

HYALÆA OBTUSA. *Hyæ. testâ parvâ, tenuissimâ, pallidissimè succinâ, hyalinâ; disco centrali brevi, rotundâ; spinis lateralibus brevibus, duplicatis, apice centrali truncato, utrinque vix dentato, aperturâ trigonâ, labro producto.*

THE OBTUSE HYALÆA. Shell small, very thin, very pale amber, glassy; ventral disc short, rounded; lateral spines short, double, central apex truncated; just perceptibly dentated on each side; aperture trigonal, outer lip produced.

SOWERBY.

Hab. — ?

The side appendages are smaller, and the bifid denticles more obtuse than in *Hyalina longirostris*, and the central apex broader and more truncated.

Species 9. (Mus. Sowerby.)

HYALÆA MINUTA. *Hyæ. testâ minutissimâ, globosâ, subcinereâ, posticè angustâ, processibus lateralibus minutè unidentatis, apice centrali producto, latè truncato, utrinque minutissimè unidentato; aperturâ angustè semilunari; margine simplici, reflexo.*

THE MINUTE HYALÆA. Shell very minute, globose, rather ashy, posteriorly narrowed, lateral processes with a minute tooth, central apex produced, broadly truncate, with a single very minute tooth on each side; aperture narrowly semilunar, with a simple reflex margin.

SOWERBY.

Hab. — ?

Species 10. (Mus. Sowerby.)

HYALÆA INTERMEDIA. *Hyæ. testâ parvâ, latâ, albâ, pellucidâ, posticè subcompressâ, quadridentatâ, denticulis lateralibus trigonis, acutis, dentibus ad apicem parvis, acuminatis; apice centrali subpro-*

ducto, truncato; aperturâ angustâ, margine simplici, reflexo.

THE INTERMEDIATE HYALÆA. Shell small, broad, white, pellucid, posteriorly rather compressed, with four teeth; lateral teeth trigonal, acute, teeth at the apex small, acuminate; central apex rather produced, truncated; aperture narrow, margin simple, reflected.

SOWERBY.

Hab. — ?

Larger, more compressed at the sides, and less globose than *H. minuta*. Smaller, and more contracted anteriorly than *H. quadridentata*.

Species 11. (Fig. a, b, Mus. Brit.)

HYALÆA LIMBATA. *Hyæ. testâ pallidè lilacinâ vel fuscâ, trigonâ, disco centrali tumido, tenuiter limbo, apice angustè subtruncato, processibus lateralibus alatis, trigonis, acuminatis, acutè tridentatis; aperturâ subtrigonâ, labio interno angustè reflexo; labro longè producto, leviter elevato, rostrato; rostro ad terminum bilobato; margine medio subcontracto.*

THE BORDERED HYALINA. Shell pale lilac or brown, trigonal, ventral disc tumid, finely ridged, apex narrowly rather truncated, lateral processes winged, trigonal, acuminate, sharply tridentate; aperture subtrigonal; inner lip narrowly reflected; outer lip much produced, slightly elevated, beaked, slightly contracted in the middle.

D'ORIGNY. Voy. Amér. Méri'd. Pl. VI. f. 11, 15.

Hab. Atlantic Ocean.

Species 12. (Fig. a, b, Mus. Brit.)

HYALÆA LONGIROSTRIS. *Hyæ. testâ fuscâ, vel albâ, versus aperturam fuscâ suffusâ, disco centrali tumido, rotundo, tenuiter limbo, apice angustè subtruncato, processibus lateralibus alatis, trigonis, bidentatis; aperturâ subtrigonâ, labio interno*

angustè reflexo, labro longè producto, valvè elevato, rostrato, rostro ad terminum bilobato; margine medio coarctato.

THE LONG-BEAKED HYALEA. Shell brown, or white, suffused with brown towards the aperture; ventral disc tumid, rounded, finely-ridged, apex narrowly subtruncated, lateral processes winged, trigonal, bidentate; aperture subtrigonal; inner lip narrowly reflected, outer lip much produced, strongly raised, beaked; beak two-lobed at the end; margin strongly contracted in the middle.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. VI. f. 12.

Hab. Atlantic Ocean.

It is with some hesitation that the writer adopts D'Orbigny's distinction between this and the preceding species. The rostrum seems to be more distinctly contracted at the base, and more suddenly upturned in *H. longirostris* than in *H. limbata*, while the lateral alae are more spread and acuminate produced in the latter species, giving the shell altogether a more triangular appearance.

Species 13. (Fig. a, b, Mus. — ? Copied.)

HYALEA LEVIGATA. *Hyalea testâ discoidali, compressâ, minutâ, albâ; processibus lateralibus cuneatis, apice*

producto, acutè uncinato; aperturâ ad processum continuatâ, labiis subæqualibus.

THE SMOOTH HYALEA. Shell discoidal, compressed, minute, white; lateral processes cornered, apex produced, sharply hooked; aperture continued to the processes, lips nearly equal.

D'ORBIGNY. Voy. Amér. Mérid. Pl. VII. f. 15-19.

Hab. — ?

A flat white species of *Hyalea* (?) very simple in form.

Species 14. (Fig. a, b, Mus. Brit.)

HYALEA QUADRIDENTATA. *Hyalea testâ succinâ, oblongâ, tumidâ, posticè subangustâ, processibus lateralibus acutè unidentatis, apice producto, angustâ, ad terminum rotundo, utrinque prope terminum unidentato, aperturâ angustâ, semilunari, margine simplici, reflexo.*

THE FOUR-TOOTHED HYALEA. Shell amber, oblong, tumid, posteriorly rather narrowed, lateral processes sharply unidentate, apex produced, narrow; rounded at the end, narrow, with a tooth at each side near the end; aperture narrow, semilunar, margin simple, reflected.

LESUEUR. D'Orbigny, Voy. Amér. Mérid. Pl. V. f. 11-15.

Hab. — ?

Pteropoda Pl. III.
(*Diacria, Atlanta*)



20 a.



15 a.



21 a.



17



15 b.



18



16 a.



19 a.



19 b.



20 b.



16 b.



21 b.

PTEROPODA.

PLATE III.

HYALÆA DIACRIA ATLANTA.

Species 15. (Fig. a, b, Mus. Brit.)

HYALÆA (Diacria) TRISPINOSA. *Hyæ. testâ compressâ, tenuissimâ, albâ, fusco in partibus suffusâ, oblique subquadratâ, trispinosâ; spinis lateralibus brevibus, acutis, utriusque ad angulâ dispositis; spinâ apicali elongatâ, attenuatâ, acuminatâ; disco ventrali convexo, disco dorsali transversè lincato, trilobato; aperturâ angustâ, marginibus subreflexis.*

THE THREE-SPINED HYALÆA. Shell compressed, very thin, white, suffused with brown in parts, oblique, rather square, three spined; lateral spines short, sharp, placed at the angle on each side, apical spine elongated, attenuated, acuminated; ventral disc convex, dorsal disc transversely ridged, trilobate; aperture narrow, margins somewhat reflected.

LESUEUR. D'Orbigny, Voy. Amér. Mériid. Pl. VII. f. 1-2.

Hab. Atlantic Ocean.

Species 16. (Fig. a, b, Mus. Brit.)

HYALÆA (Diacria) MUCRONATA. *Hyæ. testâ latâ, compressâ, albâ, fusco prope aperturam pictâ, latè subquadratâ, trispinosâ; spinis lateralibus remotis, alatis, depressis, spinâ apicali latâ eulâ, breviusculâ; disco ventrali ferè levigato, disco dorsali lobato, validè angulo; aperturâ angustâ, lobis reflexis, fuscis, angustis.*

THE SHARP-POINTED HYALÆA. Shell broad, compressed, white, painted with brown near the aperture, broadly subquadrate, three-spined; lateral spines remote, winged, depressed; apical spine rather wide, rather short, frequently truncated; ventral disc nearly smooth, dorsal disc lobed, strongly wrinkled; aperture narrow, lips reflected, brown, narrow.

LESUEUR. D'Orbigny, Voy. Amér. Mériid. Pl. VII. f. 6-10.

Hab. Atlantic Ocean.

With broader disc and wider ale than in *Hyalæa trispinosa*. The apical spine is also broader and shorter.

Species 17. (Fig. a, b, Mus. Sowerby.)

HYALÆA INFLEXA (Diacria). *Hyæ. testâ parvâ, albâ, subtrigona, trispinosâ, spinis lateralibus elevatis, brevibus; spinâ apicali productâ, uncinatâ; aperturâ usque ad spinas laterales iurissâ, latiusculâ, labio interno reflexo, labro producto, margine lobato.*

THE INBENT HYALÆA. Shell small, white, subtrigonal, three-spined; lateral spines raised, short; apical spine produced, hooked; aperture slit as far as the lateral spines, rather broad; inner lip reflected, outer lip produced, margin lobed.

LESUEUR. D'Orbigny, Voy. Amér. Mériid. Pl. IX. f. 16-20.

Hab. Atlantic Ocean.

Species 18. (Fig. a, b, Mus. Brit.)

HYALÆA LARIATA (Diacria). *Hyæ. testâ albâ, elongato-subtrigona, trispinosâ, subcompressâ; disco dorsali anticè producto, angustè rostrato, medio angulato; disco ventrali convexo, levigato, spinis lateralibus retrorsis, acutis, spinâ apicali breviusculâ, deplexâ, uncinatâ; aperturâ trigonâ, labro producto, angulato, labio interno elevatim reflexo.*

THE LIFTED HYALÆA. Shell white, elongated, subtrigonal, three-spined, subcompressed; dorsal disc produced anteriorly, narrowly beaked, with a central angle; ventral disc convex, smooth, lateral spines turned backwards, sharp, apical spine rather short, bent downwards, hooked; aperture three-cornered, outer lip produced, angular, inner lip raised or reflected.

D'ORBIGNY. Voy. Amér. Mériid. Pl. VI. f. 21-25.

Hab. Atlantic Ocean.

Species 19. (Fig. a, b, Mus. ? Copied.)

HYALÆA DEPRESSA (Diacria). *Hyæ. testâ minutâ, albâ, subtrigona, compressâ, processibus lateralibus ad rimam aperturæ projectis; aperturâ profundè semilunari, simplici; labro producto, labio interno leviter elevato, apice longè producto ad terminum acuminato, uncinato.*

PTEROPODA.—PLATE III.

THE DEPRESSED HYALÆA. Shell minute, white, sub-trigonal; compressed; lateral processes projected to the slit of the mouth; aperture deeply semilunar, simple; outer lip produced, inner lip slightly raised; apex much produced, acuminated at the end, and hooked.

D'ORNIGNY. Voy. Amér. Mérid. Pl. VII. f. 11-14.

Hab. —?

Genus ATLANTA, Lesueur.

(*Linacina*, Cuvier.)

Testa nautiliformis, semicartilaginosa, spirā planorbata, anfractibus partim celatis, ultimo tenuiter carinato.

Shell nautilus-shaped, half cartilaginous, spire flat-circular; whorls partly hidden, last with a thin keel.

Species 20. (Fig. a, b, Mus. Brit.)

ATLANTA PERONII. *Atl. testā compressā, tenuissimā, hyalinā; anfractibus apparentibus acutē angulatis; aperturā angustā; margine externo tenuissimē angulato; carinā latā, tenuissimā.*

PERON'S ATLANTA. Shell compressed, very thin, hyaline; whorls visible, sharply angular; aperture narrow, its outer edge very acutely angular; keel broad, very thin.

LESUEUR. Les. et Blain. D'Orb. Amér. Mérid.

Hab. Atlantic.

Species 21. (Fig. a, b, Mus. Brit.)

ATLANTA (Oxygyras) KERANDRENI. *Atl. testā concentricosā, membranaceā; anfractibus paucis, apicalibus celatis, ultimo, rotatis, versus apicem latē carinato; aperturā latā, margine externo rotundo.*

KERANDREN'S ATLANTA. Shell ventricose, membranaceous; whorls few, apical hidden, last towards the aperture outside broadly keeled; aperture broad, outer margin rounded.

RANG. Adams, Genera, p. 92.

Hab. —?

About 15 or 16 species of Atlanta and Oxygyras have been described, but we have not the opportunity of presenting more than two representative species.



PTEROPODA.

PLATE IV.

Genus CLEODORA. *Péron and Lesueur.*

Testa hyalina, pyramidata, haud lateraliter appendiculata, tricuspidata; aperturâ trigonâ, labro producto, rostrato.

Shell hyaline, pyramidal, without lateral appendages, three-spined; aperture trigonal, outer lip produced, beaked.

Of the few species composing this genus the most exquisitely beautiful is the *Cleodora cuspidata*.

Species 22. (Fig. a, b, Mus. Brit.)

CLEODORA AUSTRALIS. *Cle. testâ angustè pyramidatâ, trigonâ, dorso lateribusque carinato-angulatis, spinis lateralibus brevibus, versus aperturam elevatis, spini apicali acuminatâ, aperturâ trigonâ, disco ventrali concavo.*

THE AUSTRALIAN CLEODORA. Shell narrowly pyramidal, trigonal, back and sides with carinated angles, lateral spines short, raised towards the aperture, apical spine acuminated, aperture trigonal, ventral disc concave.

D'ORBIGNY. Voy. Amer. Mériid. T. VIII. f. 12-14.

Hab. Australia.

Much narrower than *Cleodora pyramidata*, which it otherwise resembles.

Species 23. (Fig. a, b, Mus. Brit.)

CLEODORA CUSPIDATA. *Cle. testâ oblongâ, trigonâ, transversè sinuatim liratâ, lateribus dorsalibus trigonis, carinâ dorsali acutâ, in rostrum productâ, carinis lateralibus brevibus, longispinis; spini apicali acutissimâ, disco ventrali medio convexo.*

THE POINTED CLEODORA. Shell oblong, trigonal, transversely sinuously ridged, dorsal sides trigonal, dorsal keel sharp, produced into a beak, lateral keels short, with long spines; apical spine very sharp, ventral disc convex in the middle.

QUOY. Voy. Astro. II. Pl. 27, f. 1-5.

Hab. Atlantic Ocean.

The spines are long, and bend upwards from the inverted apex, rather near which they take their rise.

Species 24. (Mus. —? Copied.)

CLEODORA LOBATA. *Cle. testâ latè pyramidatâ, trigonâ, transversè sinuatim liratâ; spinis lateralibus supra medium elevatis sursum acclivibus; labro producto, margine lobato.*

THE LOBED CLEODORA. Shell broadly pyramidal, trigonal, transversely sinuously ridged; lateral spines raised above the centre, sloped upwards; outer lip produced, margin lobed.

SOWERBY.

Hab. Atlantic Ocean.

From the figure in D'Orbigny's work the writer concludes this to be a distinct species, although given as a variety of *Cleodora pyramidata*. It has veritable spines at the sides, which are pointed upwards, and the dorsal surfaces are longitudinally ridged, with correspondingly lobed labial margin.

Species 25. (Fig. a, b, Mus. Sowb.)

CLEODORA PYRAMIDATA. *Cle. testâ latissimè pyramidatâ, trigonâ, levigatâ, facie centrali ad latera concavi, medio angustè tumidâ, carinâ dorsali acutâ, in rostrum acuminatum productâ, angulis lateralibus expansis, acutè subspinosis, medianis, horizontalibus.*

THE PYRAMIDAL CLEODORA. Shell very broadly pyramidal, trigonal, smooth, ventral surface concave at the sides, narrowly tumid in the middle, dorsal keel sharp, produced into an acuminated rostrum; lateral angles expanded, sharply subspinose, central, horizontal.

QUOY. Voy. de l'Astrolabe, Vol. II. Pl. XXVII. f. 7-13.

Hab. Atlantic Ocean.

PTEROPODA.—PLATE IV.

Genus BALANTIUM. *Leach.*

Testa triangularis, hyalina, compressa, longitudinaliter undata, apertura angusta, transversa, ad angulos non rimata.

Shell triangular, hyaline, compressed, longitudinally waved, aperture narrow, transverse, not slit at the angles.

This genus does not appear to differ very essentially from *Cleodora*. The angles of the aperture are not slit, and the outer lip is not produced. Several species are enumerated by authors, but with the exception of the one given below they are not known to the present writer.

Species 26. (Fig. *a, b*, Mus. Brit.)

BALANTIUM RECURVUM. *Bal. testis oblongo-triangulari,*

utrinque transversè undulata liratâ, facie dorsali longitudinaliter tri-liratâ; facie ventrali ad latera concavâ, medio latè tumido; marginibus laterali-bus acutè carinatis; spinâ apicali acutâ, recurvâ; apertura semilunari, marginibus undulatis.

THE RECURVED BALANTIUM. Shell oblong-triangular, transversely wavyly ridged across; dorsal surface with three longitudinal ridges; ventral surface concave at the sides, broadly swelled in the middle; lateral margins sharply keeled; apical spine sharp, bent backwards; aperture semi-lunar, with undulating margins.

CHILDREN. Mus. Brit.

Cleodora Balantium. Rang.

Hab. Australia.

Vide notice and figures of several other species of Balantium at Plate VI.

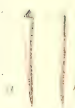
Pteropoda Pl. V.
Triton. Gress. Spirialis.



28



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PTEROPODA.

PLATE V.

Genus TRIPTERA. Quoy.

Testa tubulosa, subcompressa, versus apicem leviter bulbiformis, ad apicem carinâ circulari cincta; aperturâ reniformi.

Shell tubular, rather compressed, slightly bulbiform towards the apex, surrounded at the apex with a circular keel; aperture reniform.

Synonym. *Utricula*. Rang.

Species 27. (Mus. Brit.)

TRIPTERA COLUMNELLA. *Tri. testâ albâ, semipellucidâ, versus aperturam subcompressâ, subangulatâ, apice rotundâ.*

THE LITTLE PILAR TRIPTERA. Shell white, semipellucid, rather compressed and narrowed towards the aperture; apex rounded.

RANG. D'Orbigny, Voy. Amér. Mèrid., t. 8, f. 35. 39

Creseis obtusa. Rang.

The one or two other recorded species are not found in the collections.

Genus CRESEIS. Rang.

Testa elongata, tubularis, pyramidata, spiniformis, ligatâ.

Shell elongated, tubular, pyramidal, spine-shaped.

Synonym. *Stylôda*. Lesueur.

Species 28. (Fig. a, b, Mus. — ?)

CRESEIS ROTUNDA. *Cre. testâ subrotundâ, latiusculâ, elongatâ, fere rectâ, transversè tenuissimè striatâ; apice attenuato, acuminatâ, leviter arcuato; aperturâ rotundâ.*

THE ROUNDED CRESEIS. Shell rather rounded, rather wide, elongated, nearly straight, transversely very finely striated; apex attenuated, acuminated, slightly arched; aperture rounded.

SOWERBY.

Hab. — ?

We do not find this species elsewhere described.

Species 29. (Fig. a, b, Mus. Brit.)

CRESEIS ACICULATA. *Cre. testâ angustâ, levigatâ, attenuatâ, acuminatâ, dorso angulatâ; aperturâ subtriangulâ, labro producto, unispinoso.*

THE ACICULATED CRESEIS. Shell narrow, smooth, attenuated, acuminated, angular at the back; aperture rather trigonal, outer lip produced with a spine.

D'ORBIGNY. Tab. VIII., f. 29-31.

Hab. Atlantic Ocean.

Species 30. (Fig. a, b, Mus. Brit.)

CRESEIS STRIATA. *Cre. testâ latiusculâ, transversè rugatâ; aperturâ subrotundâ; apice retrorsim leviter arcuato, acuminatâ.*

THE STRIATED CRESEIS. Shell rather broad, transversely wrinkled; aperture rather round; apex slightly curved backwards, acuminated.

RANG. D'Orbigny, Voy. Amér. Mèrid. Pl. VIII. f. 23-25.

Hab. Atlantic Ocean.

Species 31. (Fig. a, b, Mus. Sowerby.)

CRESEIS CORNIFORMIS. *Cre. testâ breviusculâ, rotundâ, levigatâ; aperturâ rotundâ, apice acuminato, validè recurvo, uncinato.*

THE HORN-SHAPED CRESEIS. Shell rather short, rounded, smooth; aperture rounded, apex acuminated, strongly recurved, hooked.

D'ORBIGNY. Voy. Amér. Mèrid. Pl. VIII. f. 21.

Hab. Atlantic Ocean.

Species 32. (Fig. a, b, Mus. — ? Copied.)

CRESEIS VIRGULA. *Cre. testâ latiusculâ, rotundâ, levigatâ; aperturâ rotundâ, apice attenuato, acuminato, leviter arcuato.*

THE TWIG CRESEIS. Shell rather broad, rounded, smooth; aperture rounded, apex attenuated, acuminated, slightly arched.

RANG. D'Orbigny, Voy. Amér. Mèrid. Pl. VIII. f. 36.

Hab. Atlantic Ocean.

PTEROPODA.—PLATE V.

Species 33. (Fig. a, b. Mus. Brit.)

CRESEIS SPINIFERA. *Cre. testā elongatā, levigatā, acuminatā, dorso subspiraliter carinatā; carinā ad aperturam in spinam desinenti; apice valde attenuato.*

THE SPINE-BEARING CRESEIS. Shell elongated, smooth, acuminate, with a subspiral keel at the back; keel ending in a spine at the aperture; apex much attenuated.

RANG. Sowerby, Gener. of Shells. Pteropoda, f. 4.

Cleodora subula. Quoy.

Hab.—?

In this species and in *Creseis aciculata* the dorsal keel crosses the tube diagonally, so as to indicate a slight tendency to the spiral form.

Genus SPIRALIS. *Soubeyet.*

Testa lypalina, fusiformis, vel heliciformis, sinistralis.

Operculum ovatum paucispinale.

Shell glassy, fusiform or heliciform, sinistral. Operculum ovate, few-whorled.

Syn. (Pars.) *HETEROPUSUS.* Fleming.

Species 34. (Mus. Jeffreys.)

SPIRALIS FLEMINGII. *Spi. testā subheliciformi, albā, ventricosā; spirā conicā, anfractibus quinq̄is, ultimo globoso; aperturā subpyriformi, anticē productā, acuminatā, columellā rectiusculā.*

FLEMING'S SPIRALIS. Shell subheliciform, white, ventricose; spire conical, whorls five, last globose, aperture somewhat pyriform, anteriorly produced, acuminate; columella rather straight.

FORBES. Forbes and Hanley, British Mollusca.

Hab. North British seas.

Species 35. (Mus. Jeffreys.)

SPIRALIS MACANDREI. *Spi. testā fusiformi, albā, levigatā; spirā pyramidalē, levatā; anfractibus septenis, convexiusculis; aperturā pyriformi, an-*

ticē acuminatā; columellā elongatā; leviter tortuosā.

MACANDREI'S SPIRALIS. Shell fusiform, white, smooth, spire pyramidal, raised; whorls seven, rather convex; aperture pyriform, acuminate anteriorly; columella elongated, slightly tortuous.

FORBES and HANLEY. British Mollusca.

Hab. Ireland.

Species 36. (Mus. —?)

SPIRALIS ROTUNDA. *Spi. testā subdepressā, heliciformi, spirā brevi; anfractibus trinis, ultimo ventricosō, magno, latē umbilicato; aperturā obliquē ovatā.*

THE ROUNDED SPIRALIS. Shell subdepressed, heliciform, spire short, whorls three; last ventricose, large, broadly umbilicated; aperture obliquely oval.

D'ORBIGNY. Voy. Amér. Mérid. Moll., Pl. XIII. f. 16.

Hab. Atlantic Ocean.

Species 37. (Mus. —?)

SPIRALIS JEFFREYSII. *Spi. testā depressā, discoideā, spirā brevissimā, ultimo lato, rotundā, latē umbilicato.*

JEFFREY'S SPIRALIS. Shell depressed, discoidal; spire very short, last broad, rounded, broadly umbilicated.

FORBES and HANLEY. Brit. Moll.

Hab. British Channel.

Species 38. (Mus. —?)

SPIRALIS VENTRICOSA. *Spi. testā globosā, albā, anfractibus quaternis, ultimo maximo, laevi umbilicato; aperturā breviter subpyriformi, anticē angulatā; columellā tenuissimā.*

THE VENTRICOSE SPIRALIS. Shell globose, white; whorls four, last very large, not umbilicated; aperture shortly rather pyriform; anteriorly angular; columella very thin.

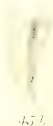
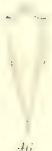
SOULEYET. Voy. de la Bonite. Moll. Pl. XIII. f. 15.

Hab. Atlantic Ocean.

Pteropoda Pl. VI.

Spiralis Limacina

Chelonicus Balanus



PTEROPODA.

PLATE VI.

Species 39. (Mus. Sowerby.)

SPIRIALIS AUSTRALIS. *Spi. testâ fusiformi, hyalini, levigatâ; spirâ statâ, conicâ, anfractibus quinis, ultimo ventricoso; aperturâ pyriformi; columellâ acuminatâ, productâ; labro medio sinuato.*

THE AUSTRALIAN SPIRIALIS. Shell fusiform, hyaline, smooth; spire raised, conical, whorls five, last ventricose; aperture pyriform, columella acuminated, produced; outer lip sinuated in the middle.

SOLLEYET. Voy. Bonite. Moll., Pl. XIII.
Hab. Australian seas.

Species 40. (Mus. Brit.)

SPIRIALIS ARCTICA. *Spi. testâ subdepresso-globosâ, spirâ parvâ, anfractibus triâs, brevissimâs, ultimo angustâ, umbilicatâ; aperturâ angustâ, columellâ rectâ.*

THE ARCTIC SPIRIALIS. Shell subdepressed-globose; spire small, whorls three, very short, last large, umbilicated; aperture large, columella straight.

FABRICIUS. (Limaena.)

Limaena helicealis, Lamarek.

Hab. Greenland.

The writer scarcely sees any reason for separating the heliceiform from the fusiform, sinistral, spiral shells of these Pteropoda.

Species 41. (Mus. — ?)

SPIRIALIS CLATHRATUS. *Spi. testâ fusiformi, hyalini, oblique punctatâ-striatâ, spirâ brevissimâ, anfractibus paucis, ultimo inflato; aperturâ oblongâ; columellâ elongatâ, tenui, acuminatâ.*

THE LATTICED SPIRIALIS. Shell fusiform, hyaline, obliquely punctate-striated; spire very short, whorls few, last inflated; aperture oblong, columella elongated, thin, acuminated.

SOLLEYET. Ed. et Soul. Voy. Bonite. Moll. Pl. XIII.
f. 17

Hab. Atlantic.

Species 42. (Mus. Brit.)

(*Atlanta*.)

ATLANTA INFLATA. *Atl. testâ albâ, nautiloidâ, fere symmetricâ, anfractibus apicalibus celatis, ultimo umbilicatâ, celâs subcurvato; aperturâ subtrigoniâ, labro in processu elongato linguiformi desinente; operculo tenuissimo, hyalino.*

THE INFLATED ATLANTA. Shell white, nautilus-shaped, nearly symmetrical; apical whorls hidden; last umbilicated slightly, keeled on the outer side; aperture subtrigonal; outer lip terminating in a long tongue-shaped process.

RANG and SOLLEYET. Mon. Pterop., Pl. XIV. f. 4.
Heliconides, D'Orbigny.

Hab. — ?

SINUSIGERA.

Genus SINUSIGERA. D'Orbigny.

Testa subglobosa, medio anfractûs ultimi sulcata, aperturâ subovata, labro sinuato, reflexo, bilobato. Operculum ignotum.

Shell subglobose, sulcated in the middle of the last whorl; aperture subovate, outer lip sinuated, reflected, bilobed. Operculum unknown.

Synonym. *Chelitropis*, Forbes.

Species 43. (Mus. Brit.)

SINUSIGERA CANCELLATA. *Sin. testâ subglobosâ, obliquè cancellatâ; spirâ subconicâ, anfractibus quinis, rotundis; aperturâ subovata, labro sinuato, bilobato, validè reflexo; lobis productis, superioribus terminata cepais, divisi.*

THE CANCELLED SINUSIGERA. Shell subglobose, obliquely cancellated, spire rather conical; whorls five, rounded; aperture subovate, outer lip sinuated, bilobed, strongly reflected; lobes produced, upper expanded, divided at the end.

D'ORBIGNY. Adams. Genera, Plate CXXXVII. f. 4.
Hab. — ?

Species 44. (Mus. Sowerby.)

SINUSIGERA MICROSCOPICA. *Shu. testâ subglobosâ, spirâliter striatâ; spirâ brevi, subconicâ; anfractibus primis, rotundis, ultimo magno; aperturâ subrotundâ, columellâ tenui, acutâ, rectiusculâ, labro bilobato, lobis moderate productis.*

THE MICROSCOPIC SINUSIGERA. Shell subglobose, spirally striated, spire short, subconical; whorls five, rounded, last large; aperture rather rounded, columella thin, sharp, rather straight, outer lip two-lobed; lobes moderately produced.

GRAY. (Struthiolaria). Voyage of the Blossom.

Chelitropis Hanleyi. Forbes.

Hab. Atlantic Ocean.

The principal difference between this and the previous species is that the former is striated spirally only, and the latter is cancellated.

Genus BALANTHIUM (continued).

Species 45. (Fig. a, b, Mus. — ?)*

BALANTHIUM INFLATUM. *Bal. testâ utrinquè convexâ, trigonâ, versus apicem decurrâ, ferè naciuntâ; facie dorsali radiatim leviter sulcatâ; aperturâ latâ, labro leviter lobato.*

THE INFLATED BALANTHIUM. Shell convex on each side, trigonal, vent downwards towards the apex,

almost hooked; dorsal surface radiately slightly grooved; aperture broad, outer lip slightly lobed.

EYDOUX et SOULEYET. Voy. de la Bonite.

Hab. — ?

Species 46. (Mus. — ?)*

BALANTHIUM AUSTRALE. *Bal. testâ angustâ, versus terminum attenuatâ, ad latera convexiusculâ; aperturâ subtrigonâ, labro acuminatâ; apice in spinulum mamillatum productâ.*

THE AUSTRALIAN BALANTHIUM. Shell narrow, attenuated towards the end; rather convex at the sides; aperture subtrigonal, outer lip acuminate; apex produced into a mamillated spike.

D'ORRIGNY. Voy. Amér. Mériid.

Hab. — ?

Species 47. (Mus. — ?)*

BALANTHIUM CHAPTALI. *Bal. testâ trigonâ, compressâ, transversè sulcatâ, ad latera submarginatâ; angulis lateralibus acutis; apice attenuatâ, acuminatâ.*

CHAPTAL'S BALANTHIUM. Shell trigonal, compressed, transversely grooved, slightly bordered at the sides; apex attenuated, acuminate.

EYDOUX et SOULEYET. Voy. de la Bonite.

Hab. — ?

* The above three specimens of Balantium are not known in the principal collections, but are copied in order to make the interesting little genus as nearly complete as possible.

PTEROPODA.

	Plate.	Species.		Plate.	Species.
aciculata, <i>D'Orbigny</i> . Cre.....	V.	29	levigata, <i>D'Orbigny</i> . Hy.	II.	13
affinis, <i>D'Orbigny</i> . Hy.	I.	3	limbata, <i>D'Orbigny</i> . Hy.	II.	11
arectic, <i>Fabricius</i> . Spi.	VI.	40	lobata, <i>Sowerby</i> . Cleo.	IV.	24
Australe, <i>D'Orbigny</i> . Bal.	VI.	46	longirostris, <i>Lesueur</i> . Hy.	II.	12
Australis, <i>D'Orbigny</i> . Cleo.	IV.	22	Macandrei, <i>Forbes</i> . Spi.	V.	35
Australis, <i>Souleyet</i> . Spi.	VI.	39	microscopica, <i>Gray</i> . Lin.	VI.	14
<i>Balantina</i> , Rang. Bal.	IV.	26	minuta, <i>Sowerby</i> . Hy.	II.	9
cancellata, <i>D'Orbigny</i> . Sin.	VI.	43	mucronata, <i>Lesueur</i> . Dia.	III.	16
Chaptalii, <i>Eydoux</i> . Bal.	VI.	47	nebulosa, <i>Deshayes</i> . Hy.	I.	5
clathratus, <i>Souleyet</i> . Spi.	VI.	41	obtus, Rang.	V.	27
columnella, Rang. Trip.	V.	27	obtus, <i>Sowerby</i> . Hy.	II.	8
corniformis, <i>D'Orbigny</i> . Cre.	V.	31	papilionacea, <i>Vincent</i> . Hy.	I.	4
Cumingii, <i>Deshayes</i> . Hy.	I.	5	Peronii, <i>Lesueur</i> . Atl.	III.	20
cuspidata, <i>Quoy</i> . Cleo.	IV.	23	pyramidata, <i>Quoy</i> . Cleo.	IV.	25
depressa, <i>D'Orbigny</i> . Dia.	III.	19	quadridentata, <i>Lesueur</i> . Dia.	II.	14
flava, <i>D'Orbigny</i> . Hy.	I.	2	<i>Rangii</i> , <i>Deshayes</i> . Hy.	I.	4
Flemingii, <i>Forbes</i> . Spi.	V.	34	recurvum, <i>Children</i> . Bal.	IV.	26
<i>Forskellii</i> , <i>D'Orbigny</i> . Hy.	I.	4	rotunda, <i>D'Orbigny</i> . Spi.	V.	36
gibbosa, Rang. Hy.	I.	7	rotunda, <i>Sowerby</i> . Cre.	V.	28
globulosa, Rang. Hy.	I.	6	spinifera, Rang. Cre.	V.	33
inflata, Rang. Atl.	VI.	42	striata, Rang. Cre.	V.	39
inflatum, <i>Eydoux</i> . Bal.	VI.	45	subula, <i>Quoy</i> . Cre.	V.	33
inflexa, <i>Lesueur</i> . Dia.	III.	17	tridentata, <i>D'Orbigny</i> . Hy.	I.	4
intermedia, <i>Sowerby</i> . Hy.	II.	10	trispinosa, <i>Lesueur</i> . Dia.	III.	15
Jeffreyi, <i>Forbes</i> and <i>Hauke</i> . Spi.	V.	37	uncinnata, <i>D'Orbigny</i> . Hy.	I.	4
Kermadeci, Rang. Atl.	III.	21	ventricosa, <i>Souleyet</i> . Spi.	V.	38
labiata, <i>D'Orbigny</i> . Dia.	III.	18	virgula, Rang. Cre.	V.	32

MONOGRAPH
OF THE GENUS
ANCYLUS.

All Thy works before Thee stood,
And Thine eye beheld them good,
While they sang with one accord,
Holy, holy, holy Lord.—*James Montgomery.*



ANCYLUS.

PLATE I.

Genus *ANCYLUS*. *Geoffroy*.

MOLLESCUM APATICUM. *Testa patelliformis, plerumque sinistralis, non-symmetrica, epidermide induta, apice sublaterali, subspinali; operculum nullum.*

MOLLESC, FRESHWATER. Shell patelliform, generally sinistral, non-symmetrical, covered with an epidermis, apex sublateral, subspinal; operculum, none.

Like the *Limnæadæ*, the *Ancyli* are found in ponds and rivers of fresh water, and like them are capable of living at times uncovered by water. They are found in all climates. We have two well-known British species. Others exist eastward in India and westward in the United States; southwards, we have Brazilian and Peruvian species, and the first and finest species on our list, *A. Cumingianus*, dates from Van Diemen's Land.

Species 1. (Fig. *a, b, c*, Mus. Sowb.)

ANCYLUS CUMINGIANUS. *Anc. testâ profundè calceiformi, subovatâ, posticè angustâ, anticè amplâ, epidermide olivaceo indutâ; dorso elevato, rotundâ, radiatim costatâ, apice posticè submarginatâ, lateraliter rade producto, unispirali.*

CUMING'S *ANCYLUS*. Shell deeply cup-shaped, sub-ovate, narrow behind, full in front, covered with an olive epidermis; back elevated, rounded, radiately ribbed, apex posteriorly submarginal, laterally much produced, unispiral.

BOURNEGAT. *Proc. Zool. Soc. 1853. Pl. XX. f. 1-9.*

Hab. Van Diemen's Land.

Species 2. (Fig. *a, b*, Mus. Brit.)

ANCYLUS TEXTILIS. *Anc. testâ depressâ, epidermide stramineâ, ad marginem brunnescenti indutâ, radiatim costatâ, concentricè tenuissimè striatâ, latius costatâ; dorso depresso, apice obtuso, sublateralî.*

THE TEXTILE *ANCYLUS*. Shell depressed, covered with a straw-coloured epidermis, becoming brown at the margin, radiately ribbed, concentrically very finely striated; back depressed, apex obtuse, sublateral.

GUFFY. *Proc. Zool. Soc. 1870. Pl. XVII. f. 9-11.*
Hab. Trinidad.

Species 3. (Fig. *a, b, c, d*, Mus. Brit.)

ANCYLUS FLUVIATILIS. *Anc. testâ ovato-subrotundâ, tenui, pallidè stramineâ, vel correatâ, subconicâ, dorso declivi; apice posticè submarginatâ, subcentrali.*

THE RIVER *ANCYLUS*. Shell ovate, rather round, thin, pale straw or bluish, subconical, back sloped; apex posteriorly submarginal, subcentral.

GMELIN. *Linn. Syst. Nat.*

Patella rostrata. D'Argenville.

Patella cornea. Poirêt.

Patella meridionalis. Beck.

Ancylus simplex. Bourguignat.

Hab. Great Britain, and Europe generally.

Species 4. (Fig. *a, b*, Mus. Brit.)

ANCYLUS LACUSTRIS. *Anc. testâ subovatâ, elongatâ, tenui, lateraliter subcompressâ, anticè subatenuatâ, epidermide fusco indutâ; dorso tenuissimè radiatim striatâ; apice postero-lateralî.*

THE LAKE *ANCYLUS*. Shell subovate, elongated, thin, laterally rather compressed, anteriorly sub-attenuated, covered with a brown epidermis; back very finely radiately striated; apex postero-lateral.

LINNEUS (Patella). *Syst. Nat.*

Patella oblonga. Dillwyn.

Hab. Great Britain, and Europe generally.

Species 5. (Mus. Brit.)

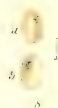
ANCYLUS CAFFRA. *Anc. testâ subolivaceo-corneâ, regulariter ovatâ, profundè calceiformi, levigatâ; dorso elevato, arcuato; apice postero-sublateralî, acuminato.*

THE CAFFER *ANCYLUS*. Shell subolive-horny, regularly oval, deeply cup-shaped, smooth; back raised, arched; apex posteriorly sublateral, acuminate.

KRAUSS. *Südafrikanischen Mollusken, T. IV. Pl. XIII.*

Hab. South Africa.

This has a much more pointed apex than *Ancylus Cumingianus*, which is the only other species with so rounded a back.



ANCYLUS.

PLATE II.

Species 6. (Fig. a, b, Mus. Brit.)

ANCYLUS JANIL. *Anc. testâ ovatâ, subconicâ, albâ, tenuiter radiatim lineatâ, anticâ angustiori; apice acuminato, posticâ submarginali, lateraliter subcentrali.*

JANUS'S ANCYLUS. Shell ovate, somewhat conical, white, finely radiately ridged; anteriorly narrower, acuminate, posteriorly submarginal, laterally subcentral.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 83.

Hab. Italy.

Species 7. (Fig. a, b, Mus. Brit.)

ANCYLUS DIAPHANUS. *Anc. testâ subdepressâ, ovatâ, pallidâ fulvâ, semipellucidâ, levigatâ; apice obtuso, lateraliter submarginali, posticâ paulo postmedianâ.*

THE TRANSPARENT ANCYLUS. Shell rather depressed, ovate, pale fulvous, semi-pellucid, smooth; apex obtuse, laterally submarginal, posteriorly a little post-median.

HALDEMAN. New Freshwater Shells.

Hab. Ohio.

Species 8. (Fig. a, b, Mus. Brit.)

ANCYLUS BACONI. *Anc. testâ parvâ, ovato-oblongâ, depressâ, translucentâ, nitentâ, pallidâ succinâ; apice obtuso, lateraliter submarginali, posticâ longè postmedianâ.*

BACON'S ANCYLUS. Shell small, ovate-oblong, depressed, translucent, shining, pale amber; apex obtuse, laterally submarginal, posteriorly far behind the centre.

BOURGUIGNAT. Proc. Zool. Soc. 1853, p. 89.

Hab. Bengal.

Species 9. (Fig. a, b, Mus. Brit.)

ANCYLUS VITREUS. *Anc. testâ latâ, depressâ, rotundâ, diaphanâ, e fulvâ, prapè marginem coracâ, fasciis vâris variegatis; apice obtuso, versus m. p. tero-lateralem declivi.*

THE GLASSY ANCYLUS. Shell broad, depressed, rounded, transparent, pale fulvous, horny near the margin, variegated with blackish bands; apex obtuse, sloped towards the postero-lateral margin.

MORELET. Proc. Zool. Soc. 1853, p. 88.

Hab. Portugal.

Species 10. (Fig. a, b, Mus. Brit.)

ANCYLUS SPINA-ROSE. *Anc. testâ dextrali, pallidâ fulvâ, levigatâ, profundè excavatâ, ovatâ, dorso arcuato, elevato, apice uncinato, posticâ et lateraliter submarginali.*

THE ROSE-THORN ANCYLUS. Shell dextral, pale fulvous, smooth, deeply cup-shaped, ovate, back arched, raised; apex hooked, posteriorly and laterally submarginal.

DEAFARNAUD. Hist. Moll. Pl. XIII. f. 10-12.

Ancylus deperditus. Zeigler.

Ancylus gibbosus. Bourguignat.

Hab. Germany.

Species 11. (Mus. Brit.)

ANCYLUS DROUETIANUS. *Anc. testâ conicâ, subviridi, levigatâ, radiatim leviter sulcatâ, ovatâ, posticâ angustiori, anticâ amplâ, margine leviter undulatâ, apice acuminato, posticâ submarginali, lateraliter subcentrali.*

DROUET'S ANCYLUS. Shell conical, greenish, smooth, radiately slightly grooved, ovate, narrow posteriorly, full anteriorly, margin slightly undulating; apex acuminate, posteriorly submarginal, laterally subcentral.

BOURGUIGNAT. Proc. Zool. Soc. 1853, Pl. XX. f. 18-25.

Hab. Teneriffe.

Species 12. (Fig. a, b, Mus. Brit.)

ANCYLUS DESHAYESIANUS. *Anc. testâ conicâ, breviter ovatâ, tenui, pallidâ coracâ, opacâ, levigatâ, intus*

ANCYLUS.—PLATE II.

alba, antice expansa; apice valde retroso, acuminato, elevato, lateraliter subcentrali; dorso declivi.

DESHAYES'S ANCYLUS. Shell conical, shortly ovate, thin pale horn, opaque, smooth, white within, anteriorly expanded; apex much thrown backwards, acuminate, elevated, laterally subcentral; back sloped.

BOURGUIGNAT. Cat. esp. Journ. Conch.

Hab. Europe.

Species 13. (Fig. *a, b*, Mus. Brit.)

ANCYLUS RUPICOLA. *Anc. testâ ovata, dextrali, profunde calyciformi, cornuâ, loricatâ, pellucidâ, dorso arcuato, apice subacuminato, ultra marginem postero-lateralem producta.*

THE ROCK-INHABITING ANCYLUS. Shell ovate, dextral, deeply cup-shaped, horny, smooth, pellucid, back arched; apex slightly acuminate, produced beyond the postero-lateral margin.

SHUTTLEWORTH. — ?

Hab. Tenerife (on moist rocks).

Species 14. (Fig. *a, b*, Mus. Brit.)

ANCYLUS SOUTHWORTH. *Anc. testâ depressâ, patulâ, coffeâ, costellis crebris radiatis et striis minutissimis concentricis sculptâ, postice angustâ, antice expansâ, marginæ dextrali rectiusculo; dorso obliquè declivi, apice depresso, posticè extra-marginali.*

SOULCY'S ANCYLUS. Shell depressed, patulous, coffee-coloured; sculptured with radiating very minute concentric striae, posteriorly narrow, anteriorly expanded, dextral margin rather straight; back obliquely sloped; apex depressed, posteriorly extra-marginal.

BOURGUIGNAT. Proc. Zool. Soc. 1853, Pl. XX, f. 26-33.

Hab. Venezuela.

A very oblique, sculptured species, with the small apex close to the margin and appearing beyond it.



ANCYLUS.

PLATE III.

Species 15. (Fig. a, b, Mus. Brit.)

ANCYLUS STRICTUS. *Anc. testâ obscure fuscâ, conicâ, angustâ, elongatâ, levigatâ, lateribus compressis, intus ceruleo-roseâ, dorso elevatâ, apice arcuatâ, longè post-medianâ.*

THE NARROWED ANCYLUS. Shell dull brown, conical, narrow, elongated, smooth, with compressed sides, inside bluish pink, back elevated, apex arched, placed far backwards.

MOORE — ? MS. Mus. Brit.

Hab. — ?

Species 16. (Fig. a, b, Mus. Brit.)

ANCYLUS BARILENSIS. *Anc. testâ depressâ, oblongâ, angustâ, castaneâ, levigatâ, intus cinosâ; dorso declivi; apice acuminatâ, posticè et lateraliter sub-marginali.*

THE ANCYLUS. Shell depressed, oblong, narrow, chestnut, smooth, vinctus within; back sloped; apex acuminated, posteriorly and laterally sub-marginal.

MONTANA. Coq. Ter. et Fluv. Bahia.

Hab. Brazil.

Species 17. (Mus. Brit.)

ANCYLUS KOOTANENSIS. *Anc. testâ brevi, latâ, sub-rotundâ, depressâ, corneo-rubescenti; apice obtuso, subcentrali, frequenter nigrescenti.*

THE KOOTAN ANCYLUS. Shell short, broad, rather round, depressed, reddish horn; apex obtuse, subcentral, often black.

BAIRD. Proc. Zool. Soc. 1863, p. 69.

Hab. River Oregon.

Species 18. (Mus. Brit.)

ANCYLUS PARALLELUS. *Anc. testâ compressâ, oblongâ, subrectilaterali, translucidâ, pallidissimè corneâ; dorso declivi, apice posticè et lateraliter sub-centrali.*

THE PARALLEL ANCYLUS. Shell compressed, oblong, rather straight-sided, transparent, very pale horn; back sloped, apex posteriorly and laterally subcentral.

HALDEMAN. Mon. Freshwater. Sh. Proc. Zool. Soc. 1853, 84.

Hab. New Orleans.

Species 19. (Mus. Brit.)

ANCYLUS CONCENTRICUS. *Anc. testâ olivaceo-corneâ, sub-conicâ, sulcis inconspicuis undulatis radiatâ, concentricè lineatâ, oblongâ, posticè angustatâ, anticè subexpansâ; dorso versus apicem elevatâ; apice acuminatâ, arcuatâ, ad marginem postico-lateralem approximâtâ.*

THE CONCENTRIC ANCYLUS. Shell olive-horn, rather conical, rayed with indistinct undulating grooves, with concentric lines, oblong, posteriorly narrowed, anteriorly subexpanded; back raised towards apex; apex acuminated, hooked, approaching the postero-lateral margin.

D'ORBIGNY. Voy. Amér. Mérid. t. v. p. 354.

Hab. Montevideo.

Species 20. (Mus. Brit.)

ANCYLUS HERBERTUS. *Anc. testâ elongatâ, angustâ, compressâ, punctulis nigrescentibus aspersâ, latere dextrali rectiusculo; apice sublateralî, a margine postico subremotâ.*

THE SPINKLED ANCYLUS. Shell elongated, narrow, compressed, sprinkled with little blackish spots, left side rather straight; apex rather lateral, rather remote from the posterior margin.

GUILDING. Proc. Zool. Soc. 1853.

Hab. Antilles.

Species 21. (Mus. Brit.)

ANCYLUS CHITTYI. *Anc. testâ griseo-fuscâ, obliquâ, profundè calyculatâ, subovatâ, anticè subacuminatâ; dorso obliquè arcuatâ; apice gibboso, extra marginem postico-lateralem productâ.*

CHITTY'S ANCYLUS. Shell grey-brown, oblique, deeply cup-shaped, subovate, anteriorly subacuminated; back obliquely arched, apex gibbous, produced beyond the postero-lateral margin.

ADAMS. (C. B.) — ?

Hab. Jamaica.

Species 22. (Mus. Brit.)

ANCYLUS SIBIRICUS. *Anc. testâ dextrali, obliquè conicâ, fuscâ, ovatâ, intus albâ; dorso alto, obliquâ, apice extra-marginali, obtusiusculo.*

THE SIBIR ANCYLUS. Shell dextral, obliquely conical, fulvous, ovate, white within; back high, oblique, apex extra-marginal, rather obtuse.

GEESFELD. Moll. Sibir. et Amur.

Hab. Sibir.

ANCYLUS.—PLATE III.

Species 23. (Mus. Brit.)

ANCYLUS MERICANDI. *Anc. testâ angustâ, compressâ, elongatâ, ferruginâ, opacâ, intus subrosâ; dorso declivi, apice posticè subcentrali, lateraliter submarginato.*

MERICANDI'S ANCYLUS. Shell narrow, compressed, elongated, ferruginous, opaque, pinkish inside; back sloped, apex posteriorly subcentral, laterally submarginal.

D'ORRIGNY. Voy. Amér. Mérid. T. V. p. 355.

Ancylus Bahiensis. Moricand.

Ancylus Nacienta. Spix.

Hab. Lake Baril, Bahia.

Species 24. (Mus. Brit.)

ANCYLUS CULROIDES. *Anc. testâ depressâ, filvâ, radiatim tenuiter striatâ, elongatâ, posticè subcontractâ, dorso levè declivi, apice subacuminato, subcentrali.*

THE HOOD-SHAPED ANCYLUS. Shell depressed, fulvous, radiately finely striated, elongated, posteriorly rather narrowed, back gently sloped, apex acuminate, subcentral.

D'ORRIGNY. Amér. Mérid. III. p. 335.

Hab. South America.

Species 25. (Mus. Brit.)

ANCYLUS FILVUS. *Anc. testâ oratâ, conicâ, tenuissimè striatâ, semi-pellucidâ, roseo-fulvâ, apice posticè et lateraliter subcentrali.*

THE THREADED ANCYLUS. Shell ovate, conical, very finely striated, semi-pellucid, rose-fulvous, apex posteriorly and laterally subcentral.

CONRAD. New Freshwater Shells. Hableman's monograph.

Hab. Alabama.

Species 26. (Mus. Brit.)

ANCYLUS RADIATUS. *Anc. testâ parvâ, albâ, transluetâ, subconicâ, striis tenuissimis radiatâ, oratâ, anticè subangustatâ, apice versus marginem post-lateralem productâ.*

THE RAYED ANCYLUS. Shell small, white, translucent, subconical, rayed with very fine striae, ovate, anteriorly rather narrowed, produced towards the post-lateral margin.

GUILMO. Zool. Journ. Vol. III. p. 536.

Hab. St. Vincent.

Species 27. (Mus. Brit.)

ANCYLUS HAVANENSIS. *Anc. testâ depressâ, longiusculâ, posticè subangustatâ, corneâ, intus subrosâ; apice obtuso, posticè subcentrali, lateraliter submarginato.*

THE HAVANA ANCYLUS. Shell depressed, rather long, posteriorly rather narrow, horny, pinkish within; apex obtuse, posteriorly subcentral, laterally submarginal.

PEIFFER. Bohrg. Proc. Zool. Soc. 1853.

Hab. Cuba.

Species 28. (Mus. Brit.)

ANCYLUS BEANI. *Anc. testâ parvâ, corneâ, levigatâ, nitentâ, depressâ, ovatâ, latere dextrali rectiusculâ; dorso declivi, apice obtuso versus marginem postico-lateralem elevato.*

BEAN'S ANCYLUS. Shell small, horny, smooth, shining, depressed, ovate, right side rather straight; back sloped, apex obtuse, raised towards postero-lateral margin.

BOURQUINAT. Proc. Zool. Soc. 1853, p. 81.

Hab. Guadaloupe.

Species 29. (Mus. Brit.)

ANCYLUS OBLIQUUS. *Anc. testâ parvâ fusco-corneâ, obliquâ, profundâ, subovatâ, levigatâ, posticè paulo attenuatâ; apice productâ, ad marginem postico-lateralem extensa.*

THE OBLIQUE ANCYLUS. Shell small, brownish horn, oblique, deep, subovate, smooth, posteriorly a little attenuated; apex produced, extended to the posterior-lateral margin.

BRODERIP. Proc. Zool. Soc. 1832, p. 202.

Hab. Chili.

Species 30. (Mus. Brit.)

ANCYLUS FUSCUS. *Anc. testâ auro-fusâ, levigatâ, oblongâ, intus firè albâ, lateribus subcompressis, rectiusculis; dorso subelevato, apice obtuso, lateraliter et posticè subcentrali.*

THE BROWN ANCYLUS. Shell golden brown, smooth, oblong, almost white within; sides rather compressed, rather straight; back rather raised, apex obtuse, laterally and posteriorly subcentral.

ADAMS (C. B.). Boston Journ. Nat. Hist. Vol. III., p. 329.

Hab. United States.

MONOGRAPH

OF THE GENUS

A L Y C Æ U S.

Thou art in all things one, in each thing many :
For Thou art infinite in one and all.—*Trench.*



2.



1a.



3.



1b.



4.



5.



6.



7.



9.



8.

ALYCÆUS.

PLATE I.

Genus ALCYÆUS. Gray.

Testa terrestris, heliciformis; spira conica, sutura profunda; ultimus anfractus distortus, medio dorsi tumidus, callo retroverso suturam tegens, post marginem aperturæ contractus. Operculum rotundum conicum inconspicuè multispirale.

Shell terrestrial, heliciform; spire conical, suture deep; last whorl distorted, tumid at the middle of the back, covering the suture with a retroversal callus, contracted behind the margin of the aperture. Operculum rounded, horny, inconspicuously multispiral.

All the Alycæi browse in eastern pastures. A large numerical proportion of the species find their homes in India proper; but Borneo, Japan, and other eastern lands and islands produce their contingents. The typical species, *Alycæus gibbus*, the first type, belongs to Cochin-China.

The peculiarities which distinguish the Alycæi from other Cyclotomidae are very interesting. At first you have a more or less regular spire of several volutions; then, at the side of the last whorl, farthest removed from the aperture, the spiral tube begins to swell, increasing in volume to about the middle of the back, when it suddenly contracts, throwing back a narrow callus at the suture. Between this contraction and the back edge of the aperture, the tube is always narrow, but with various callosities, mouth rings, or other inequalities till the aperture itself is reached.

Species 1. (Fig. a, b, Mus. Brit.)

ALYCÆUS CRENATUS. *Aly. testâ conicâ, subcicridi, omnino minuti striatâ, ultimo anfractu ad dorsum moderate tumido, tum calld, breviter, contracto, deindè callo magno. obliquo cincto, ante callum subexpanso; callo retroverso rugoso, albo, inequali, elongato; aperturæ margine albo, latè laqueato; operculo lato.*

THE CRENATED ALCYÆUS. Shell conical, greenish, all over minutely striated, last whorl moderately tumid at the back, then strongly, briefly, contracted, afterwards girt with a large, oblique callus, rather expanded in front of the callus; retroversal callus rough, white, unequal, long; aperture white at the margin, broadly fluted; operculum broad.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng. 1871.

Hab. Burrail Range, N. Cachar.

The white, oblique 'collar ruff' and the broadly fluted margin of the mouth distinguish this species, which is of small size.

Species 2. (Mus. Brit.)

ALYCÆUS DIAGONUS. *Aly. testâ minutâ, pallidè castaneâ, heri, obliquè spirali; aperturâ crassâ, margine duplicato, subcrenato, umbilico mediocri, tumulo dorsali haud magno.*

THE DIAGONAL ALCYÆUS. Shell minute, pale chestnut, smooth, obliquely spiral; aperture thick, with a double rather crenulated margin; umbilicus middle-sized; dorsal swelling not large.

GODWIN-AUSTIN. Journ. Asi. Soc. Bengal. 1871.

Hab. Diyung Valley, N. Cachar.

Species 3. (Mus. Brit.)

ALYCÆUS VESTITUS. *Aly. testâ conicâ, pallidè castaneâ, anfractibus ad suturam crenulatis; ultimo ad dorsum moderate tumescenti; aperturâ ad anfractum penultimum emarginatâ; margine albo, crasso, simplici.*

THE INVESTED ALCYÆUS. Shell conical, pale chestnut; whorls crenulated at the suture, last moderately swelling at the back; aperture emarginated at the penultimate whorl; margin white, thick, extûs declivi.

BLANFORD. Journ. Asi. Soc. Bengal, 1871.

Hab. Amcan Hills.

Species 4. (Mus. Brit.)

ALYCÆUS GIBBUS. *Aly. testâ conicâ, fulvâ; spirâ breviusculâ, apici rubro; ultimo anfractu lateraliter expanso, ad dorsum depresso-gibboso, prope aperturam angustissimo; callo suturali inconspicuo; aperturâ rotundâ, margine tenuiter duplicato; umbilico brevi.*

THE HUNCHBACK ALCYÆUS. Shell conical, fulvous; spire rather short, with red apex; last whorl laterally expanded, depressed-gibbous at the back, very narrow near the aperture; sutural callus inconspicuous; aperture rounded, margin thinly doubled; umbilicus short.

FERGUSON.

Hab. Cochin-China.

Species 5. (Mus. — ? Copied.)

ALYCÆUS MARGARITUS. *Aly. testā subglobosā, albidā; anfractibus tribus, rotundis, ultimo post aperturam moderatē (?) contracto, aperturā margine duplicato; margine interno tenui, producto; margine externo planato, expanso; umbilico parvo.*

THE PEARL ALYCÆUS. Shell subglobose, whitish; whorls three, rounded, last moderately (?) contracted behind the aperture; margin of the aperture double; inner margin thin, produced; outer margin flattened, expanded; umbilicus small.

THEODALD MSS. Hanley, Conch. Ind. Pl. 95, f. 10.
Hab. Shan provinces.

The second figure in the Indian Conchology (Pl. XCVII., f. 7), given as representing a variety of this species, has every appearance of belonging to another. I have therefore named it *Al. microstoma* in Plate IV.

Species 6. (Mus. — ?)

ALYCÆUS PYRAMIDALIS. *Aly. testā majusculā, pyramidalī, rubro-fusci, lavi; ultimo anfractu lateraliter expanso, ad dorsum gibboso, subitō contracto, tum breviter continuo, callo suturali inconspicuo elongato; margine aperturæ lato, planato; umbilico angustissimo.*

THE PYRAMIDAL ALYCÆUS. Shell rather large, pyramidal, red-brown, smooth; last whorl laterally expanded, gibbous at the back, suddenly contracted, then shortly continued, sutural callus inconspicuous, long; margin of the aperture broad, flattened, rather narrow.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. 225.

Hab. Therabuin Hill, Tennasserim, Burmah.

Much resembling *Alycæus gibbus*, but more pyramidal.

Species 7. (Mus. Brit.)

ALYCÆUS FUSILLUS. *Aly. testā parvā, albā, depressā, liratā; ultimo anfractu ad latus latē producto, ad dorsum inflato et profundē rugato; ad tumorem terminum leviter coarctato, tum post aperturam subexpanso; callo suturali parvo, brevi, distincto; umbilico lato, margine aperturæ crasso, subrotundo.*

THE DWARF ALYCÆUS. Shell small, white, depressed, ridged; last whorl broadly produced at the side,

inflated and deeply-wrinkled at the back, slightly contracted at the end of the tumour, then a little expanded behind the aperture; sutural callus small, short, distinct; umbilicus broad, margin of the aperture thick, rather round.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng.

Hab. Javai to Asalu.

Species 8. (Mus. Godwin-Austin.)

ALYCÆUS KHASIACUS. *Aly. testā depressā, fusco-rubescenti, profundē sulcatā, anfractibus quaternis, depressis, apicali rubro, ultimo ad dorsum valdē inflato, profundē sulcato, ad terminum tumoris subitō profundē contracto, tum usque ad marginem aperturæ expanso; callo suturali brevi, tenui, conspicuo, umbilico lato, margine aperturæ crasso, subrotundo.*

THE KHASIAN ALYCÆUS. Shell depressed, reddish brown, deeply grooved, whorls four, depressed, apical red, last much inflated at the back, suddenly and deeply contracted at the end of the tumour, then expanded to the margin of the aperture; sutural callus short, thin, conspicuous; umbilicus broad, margin of the aperture thick, rounded.

GODWIN-AUSTIN. Journ. Asi. Soc. Beng. 1871, Vol. XL.

Hab. Khasia and Jaintia Hills.

Species 9. (Mus. Godwin-Austin.)

ALYCÆUS CONICUS. *Aly. testā solidā, subviridi, obtusē conicā, ad suturam crenulatā; anfractibus quinis, apicalibus rubescentibus, ultimo lato, tumore dorsali densē lirato-rugato, ad terminum tumoris breviter angusto, lavi; margine aperturæ crassissimo, retrorsim declivi, callo suturali elongato, angusto, rugoso; umbilico maximo.*

THE CONICAL ALYCÆUS. Shell solid, greenish, obtusely conical, crenulated at the suture; whorls five, apical, reddish, last broad, dorsal tumor closely wrinkled in ridges, shortly narrow, smooth at the end of the tumor; margin of the aperture very thick, shelving backwards, sutural callus lengthened, narrow, rough; umbilicus very large.

GODWIN-AUSTIN. Journ. Asi. Soc. Bengal, 1871, Vol. XL.

Hab. East of Kopili River, North Cachar.



11



10



12



13



14a



14b



15



16



18



17

ALYCÆUS.

PLATE II.

Species 10.

ALYCÆUS ANDAMANÆ. *Aly. testâ subdepressâ, latâ concentricè distantè liratâ, inter lineas spirâliter striatâ, anfractibus trinis, ultimo ad dorsum moderate inflato, post marginem aperturæ moderate contracto, umbilico latissimo; aperturâ ad anfractum subemarginatâ, margine albo, tenuiter duplicato.*

THE ANDAMAN ALYCÆUS. Shell subdepressed, broad, concentrically distantly ridged, spirally striated between the ridges; whorls three, last very broad, moderately inflated at the back, moderately contracted behind the margin of the aperture; umbilicus very broad, aperture rather emarginated at the last whorl; margin white, thinly duplicate.

BENSON. Ann. Nat. Hist. 1861, Ser. 3, Vol. VII.

Hab. Port Blair, Andaman Islands.

Species 11. (Mus. Brit.)

ALYCÆUS POLYGONUS. *Aly. testâ conicâ, fuscâ, loricatâ; anfractibus quaternis, ultimo ad medium dorsî breviter inflato, tum breviter contracto, et margine albo, lato exfoliato, deinde autè aperturæ marginem breviter angustò; callo suturali elevato, longiusculo; umbilico parvo, margine aperturæ albo, polygono.*

THE POLYGONAL ALYCÆUS. Shell conical, brown, smooth; whorls four, last shortly indented at the middle of the back, then briefly contracted, sutural callus raised, rather long; umbilicus small, margin of the aperture white, polygonal.

BLANDFORD. Journ. Asi. Soc. Beng. 1862.

Hab. —

Species 12. (Mus. Hanley.)

ALYCÆUS CUCULLATUS. *Aly. testâ depressâ, albâ, concentricè regulariter subulatâ; anfractibus trinis, ultimo latissimo, ad dorsum breviter tumido, semi-truncato, unde tumorem brevissimè contracto; margine aperturæ externè latè expanso, albo interno,*

longè producto, plicato et ligucato; umbilico latissimo, callo suturali concinno, breviusculo.

THE HOODED ALYCÆUS. Shell depressed, white, concentrically regularly grooved; whorls three, last very broad, shortly tumid at the back, half-truncated, very shortly contracted in front of the tumor; external margin of the aperture broadly expanded, white, internal lengthily plaited and fluted; umbilicus very broad; sutural callus neat, rather short.

THEOBALD. Journ. Asi. Soc. Vol. III. p. 51.

Hab. Shan States.

Species 13. (Mus. Brit.)

ALYCÆUS URNULA. *Aly. testâ albâ, altâ, leri; anfractibus quaternis prominentibus, supra medium subangulatis, ultimo albo, post aperturam breviter angustissimo; tumori dorsali magno, in marginem contractum concinno desinenti; callo suturali distincto, breviusculo; umbilico parvo, margine aperturæ angusto, rotundo.*

THE URN ALYCÆUS. Shell white, high, smooth; whorls four, prominent, rather angular above the middle, last high, shortly very narrow behind the aperture; dorsal tumor large, ending in a contracted neat margin; sutural callus distinct, rather short, umbilicus small, margin of the aperture narrow, round.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. II.

Hab. Darjeeling, Himalaya.

Species 14. (Fig. a, b, Mus. Brit.)

ALYCÆUS FLECTOCHEILUS. *Aly. testâ minutâ, albâ, subcompressâ, tenuissimè striatâ; anfractibus quaternis angustis, ultimo ad dorsum breviter tumido, tum concolato, deinde callo flexuoso cincto; margine aperturæ producto, quinguplicato; callo suturali subelongato; umbilico mediocri.*

THE PLAITED ALYCÆUS. Shell minute, white, rather compressed, very finely striated; whorls four, narrow, last with short tumulus at the back, then narrowed, afterwards girt with a flexuous

ALYCEUS.—PLATE II.

callus; margin of the aperture produced, five-plaited; sutural callus rather lengthened; umbilicus middle-sized.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III, p. 180.
Hab. Rungun Valley.

The margin of the aperture in this interesting little shell is curiously produced and plaited like a frill.

Species 15. (Mus. Brit.)

ALYCEUS AMPHORA. *Aly. testâ altâ, albidâ, levî, lateraliter subcompressâ; anfractibus quinis, superioribus rubescentibus, brevibus; ultimo alto, ventricosâ, superiù subangulatâ, infri lateraliter angustatâ et angulatâ; ad dorsum valdè inflatâ, tum subitò contractâ, breviter angustissimâ, post aperturam expansâ; collo suturali angustâ, elongatâ; umbilico parvâ; aperturâ latâ, reflexâ, margine ad anfractûs juncturam semi-interruptâ.*

THE VASE ALYCEUS. Shell high, whitish, smooth, laterally subcompressed; whorls five, upper rather red; last high, ventricose, somewhat angular above, narrow and angular below, much inflated at the back, then suddenly contracted, very narrow for a short distance, expanded behind the aperture; sutural callus narrow, elongated; umbilicus small; aperture broad, reflected; margin half interrupted at the juncture of the whorl.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII.
Hab. Moulemin and Tennasserim.

Species 16. (Mus. —?)

ALYCEUS SUCCINEUS. *Aly. testâ subdepressâ, sucineo-fusâ; anfractibus quaternis regulariter angustis, ultimo ad dorsum breviter gibbosa, tum angustissimâ, levî, medio partis angustâ margine albo extantî interruptâ; aperturâ margine albo, polygonâ; collo suturali obliquo, albo, conspicuâ, brevissimâ; umbilico medietati.*

THE AMBER ALYCEUS. Shell subdepressed, amber-brown; whorls four, regularly wrinkled, last shortly gibbous at the back, then very narrow, smooth, interrupted in the middle of the narrow

part by a thick, outstanding white margin; margin of aperture white, polygonal; sutural callus oblique, white, conspicuous, rather short; umbilicus medium-sized.

BLANFORD. Journ. Asi. Soc. Bengal, 1862, Vol. XXXI.

Hab. Aracan Hills.

Species 17. (Mus. Brit.)

ALYCEUS VULCANI. *Aly. testâ fuscâ, subdepressâ; anfractibus quaternis, regulariter rugatis; ultimo ad dorsum lateraliterque latè tumido, post medium dorsî subito contracto, tum angustâ levî; medio partis angustâ callis duobus annularibus interrupto; collo suturali brevissimâ, margine aperturæ subhexagonâ.*

VULCAN'S ALYCEUS. Shell brown, subdepressed; whorls four, regularly wrinkled; last broadly tumid at the back and laterally, suddenly contracted past the middle of the back, then narrow, smooth; interrupted in the middle of the narrow part with two annular calli; sutural callus rather short; margin of the aperture nearly hexagonal.

BLANFORD. Journ. Asi. Soc. Bengal, 1863, Vol. XXXII, p. 323.

Hab. Peak of Poppa in Ava.

Species 18. (Mus. —?)

ALYCEUS FEDDENIANUS. *Aly. testâ altâ, levî, fuscâ; anfractibus quaternis, tertio inflatâ, subangulatâ, ultimo lateraliter subcompressâ, alto, triangulatâ; versus aperturam gradatim angustatâ; collo suturali elongatâ, levî; umbilico latissimâ, margine aperturæ albo, postea planulatâ.*

THE FEDDEN ALYCEUS. Shell high, smooth, brown; whorls four, third inflated, slightly angular; last laterally subcompressed, high, biangular; gradually narrowed towards the aperture; sutural callus elongated, smooth; umbilicus rather broad; margin of aperture white, flattened behind.

THEOPALD. Journ. Asi. Soc. Bengal, 1870.

Hab. Shan States, Upper Salween.



20.



19.



21.



23 a



22



23 b



24



25



27



26

ALYCEUS.

PLATE III.

Species 19. (Mus. Brit.)

ALYCEUS MOUTON. *Aly. testā glaciā, ventricosā, lavi; anfractibus quinīs, superioribus parvis, ultimo ventricosō, lateraliter et infrā ad dorsum inflato; post aperturam breviter angustā, aperturā margine expanso, planato; umbilico brevissimo.*

MOUTON'S ALYCEUS. Shell yellow, ventricose, smooth; whorls five, upper small; last inflated laterally and below at the back, shortly narrowed behind the aperture; margin of the aperture expanded, flattened; umbilicus very short.

ADAMS. Proc. Zool. Soc. 1862, p. 275.

Hab. Isl. Formosa.

Species 20. (Mus. Brit.)

ALYCEUS AVE. *Aly. testā parvā, depressā, albā, regulariter rugatā; anfractibus quinīs, ultimo tumori dorsali magno, subito ad terminum contracto; anfractibus parte inter tumorem et aperturam marginem brevissimū, medio inflatū; collo suturali brevi, distincto; umbilico lato.*

THE AVE ALYCEUS. Shell small, depressed, white, regularly wrinkled; whorls narrow, last with large dorsal tumour, suddenly contracted at the end; part of the whorl between the tumour and the margin of the aperture rather short, inflated in the middle; sutural callus short, distinct; umbilicus broad.

BLANFORD. Journ. Asi. Soc. 1863.

Hab. Hills of Mandelay and Ava.

Species 21. (Mus. Brit.)

ALYCEUS SWINHOE. *Aly. testā elevatā, conicā, albidoglaciā, lavi, anfractibus quinīs, suturā profundā separatā; ultimo ventricosō, lato, tumori laterali subinflato, tūc brevissimē angustato; collo dorsali minuto, distincto, aperturā margine tenui, planato.*

SWINHOE'S ALYCEUS. Shell raised, conical, whitish-yellow, smooth, whorls five, separated by a deep suture; last ventricose, broad, distinct, swelled

by a lateral tumour, then very shortly narrowed; dorsal callus minute, distinct, margin of aperture thin, flattened.

H. ADAMS. Proc. Zool. Soc. 1866, p. 319.

Hab. Isl. Formosa.

Species 22. (Mus. Theobald.)

ALYCEUS KURZIANUS. *Aly. testā depressā, fuscā, tenuiter sulcatā, anfractibus quinīs, depressis, ultimo ad dorsum medio inflato, validē rugato, tūc breviter contracto et collo annulari cincto, post aperturā marginem crassitudine crescenti; aperturā majusculā, albā, infrā cinctā, canaliferā; marginem columellari rectiusculo, margine externo crenulato; collo suturali minutā; umbilico latissimo.*

KURZ'S ALYCEUS. Shell depressed, fulvous, finely grooved, whorls five, depressed, last dorsally inflated in the middle, strongly wrinkled, then shortly contracted and girt with an annular callus, increasing in thickness behind the margin; aperture rather large, white, cuneate below, with a canal; columellar margin rather straight, outer margin crenulated; sutural callus minute; umbilicus very broad.

THEOBALD. Journ. Asi. Soc. Bengal.

Hab. Nattarina, Brome.

Species 23. (Mus. Hanley.)

ALYCEUS RICHTOFENI. *Aly. testā subdepressā, albidā, regulariter sulcatā; spirā acuminatā, anfractibus angustibus, ultimo medio dorsi inflato tūc contracto, parte inter tumorem et aperturam marginem angustā, levigatā, per callum annularem in medio divisā; margine aperturæ duplicato, parte externo latē planulato, parte interno producto, angustato, suberecto; collo suturali tenui, angustato; umbilico magno.*

RICHTOFEN'S ALYCEUS. Shell subdepressed, whitish, regularly grooved; spire acuminated, whorls narrow, last inflated in the middle of the back, then contracted, the part between tumour and edge of aperture narrow, smooth, divided in the middle by an annular callus; margin of aper-

ALYCEUS.—PLATE III.

ture double, outer part broadly flattened, inner part produced, narrow, slightly crenated; sutural callus thin, narrow; umbilicus large.

BLANFORD. Journ. Asi. Soc. Bengal, 1863, Vol. XXXII. p. 324.

Hab. Moulmein.

Species 24. (Mus. Brit.)

ALYCEUS DISTORTUS. *Aly. testâ breviter conicâ, griseofulvâ, levi; anfractibus quaternis, rotundis; ultimo alto, post aperturam brevissimè angustâ, ad dorsum et lateraliter latè inflatâ, tumore dorsali prope aperturam in marginem concinnum desinenti; umbilico parvo, margine aperturæ rotundo; callo suturali angustâ, elongatâ.*

THE DISTORTED ALYCEUS. Shell shortly conical, grey-fulvous, smooth; whorls four, rounded; last high, behind the aperture very shortly narrow; dorsal tumour ending near the aperture in a neat margin; umbilicus small, margin of aperture round; sutural callus narrow, long.

HAINES. MS. Brit. Mus.

Hab. —?

Species 25. (Mus. Brit.)

ALYCEUS NITIDUS. *Aly. testâ fuscâ, breviter conicâ, levi, regulariter sulcatâ; anfractibus quaternis, ultimo inter marginem aperturæ et tumorem dorsalem mediè inflatâ, tumore dorsali mediocri, profundè rugatâ, callo dorsali elongatâ, distincto; aperturæ margine duplicatâ, parte internâ subrotundâ, productâ, parte externâ complanatâ, infrà angulatâ; umbilico parvo.*

THE NEAT ALYCEUS. Shell brown, shortly conical, smooth, regularly grooved; whorls four, last between the margin of the aperture and the dorsal tumour inflated in the middle, dorsal

tumour medium sized, deeply wrinkled, dorsal callus elongated, distinct; margin of aperture double, inner part rather round, produced; outer part flattened, angular below; umbilicus small.

BLANFORD. Journ. Asi. Soc. Bengal, 1863.

Hab. Aracan.

Species 26. (Mus. Brit.)

ALYCEUS BACCI. *Aly. testâ conicâ, altiusculâ, levi, tenui, pallidè subcicridi, apice succineo; anfractu ultimo breviter ante aperturam breviter angustâ, tumore dorsali magno, rotundo; callo suturali inconspicuo; margine aperturæ angustâ, simplici, albo.*

THE BACCUS ALYCEUS. Shell conical, rather high, smooth, thin, pale greenish, apex amber; last whorl shortly narrow, dorsal tumour large, round; sutural callus inconspicuous; aperture of the margin narrow, simple, white.

PFEIFFER. Mon. Pneum. —?

Hab. —?

Species 27. (Mus. Brit.)

ALYCEUS BERTH. *Aly. testâ pallidè fulvâ, depressâ, levi, spirâ acuminatâ; ultimo anfractu post aperturæ marginem brevissimè angustâ, tumori dorsali mediocri, sulcatâ; callo suturali conspicuo, valido, elongatâ; aperturæ margine angustâ, laqueatâ; umbilico lato.*

BERTH'S ALYCEUS. Shell pale fulvous, depressed, smooth, spire acuminate; last whorl very shortly narrow behind the aperture; dorsal tumour middle-sized, grooved; sutural callus conspicuous, strong, elongated; margin of aperture narrow, fluted; umbilicus broad.

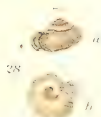
GODWIN AUSTIN —?

Hab. —?





29.



28.



30.



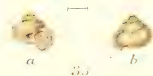
31.



32a.



32b.



33.



34.



35.



36.

ALYCEUS.

PLATE IV.

Species 28. (Mus. Theobald.)

ALYCEUS MICROSTOMA. *Alg. testâ fulvâ, subdepressâ, regulariter rugatâ; ultimo anfractu gradatim inflato, tunc propè aperturam marginem brevissimè angustato, laevi; margine aperturæ contracto, crenato, propè suturam sinuato; umbilico lato.*

THE SMALL-MOUTHED ALYCEUS. Shell brown, subdepressed, regularly wrinkled; last wh. rl gradually inflated, then very shortly narrowed and smooth near the margin of the aperture; margin of aperture contracted, crenated, sinuated near the suture; umbilicus broad.

SOWERBY.

Allyceus margarita, Theobald (MS.).

Hab. Shan Provinces.

This shell is so different from *Allyceus margarita*, as originally described, that the writer has found it necessary to give it a name.

Species 29. (Mus. Brit.)

ALYCEUS NICOBARICUS. *Alg. testâ conicâ, subdepressâ, subviridè-cornuâ; anfractibus quaternis, rotundis, ultimo medio dorsi moderatè inflato, ad terminum tumore dorsali concinè marginato, deindè laevi, angusto; umbilico mediovi; margine aperturæ duplicato, parte laterali crassâ subproductâ; callo suturali brevissimo, conspicuo.*

THE NICOBAR ALYCEUS. Shell conical, subdepressed, greenish horny; whorls four, round, last moderately inflated in the middle of the whorl, neatly edged at the end of the dorsal tumour, then smooth, narrow; umbilicus medium-sized; margin of aperture double, inner part thick, slightly produced; sutural callus very short, conspicuous.

MORCH — ? MS. Brit. Mus.

Hab. Nicobar Islands.

Species 30. (Mus. Brit.)

ALYCEUS OTIOPHORUS. *Alg. testâ conicâ, altiusculâ, laevi, griseo-albidâ; anfractibus quinis, prominentibus; ultimo fere aperturam constricto, tunc conspicuè*

inflato et ad marginem tumore contracto; tumore dorsali brevi; callo suturali brevissimo; umbilico parvo; margine aperturæ suprà infrâque subangulato.

THE EAR-HOLE ALYCEUS. Shell conical, rather high, smooth, whitish-grey; whorls five, prominent; last constricted behind the aperture, then conspicuously inflated and contracted at the edge of the tumour; dorsal tumour short; sutural callus very short; umbilicus small; margin of aperture slightly angular above and below.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. VIII. p. 188 (Cyclostoma).

Hab. Himalaya.

Species 31. (Mus. Hanley.)

ALYCEUS GLABER. *Alg. testâ fulvâ, depresso-conicâ; leviter sulcatâ; anfractibus quaternis, angustatis, apicalibus rubris, ultimo inter marginem aperturæ et tumorem dorsalem bi-calloso; tumore dorsali moderatè inflato, rugato; callo suturali subelongato; umbilico latissimo; margine aperturæ duplicato.*

THE SMOOTH ALYCEUS. Shell fulvous, depressed-conical; slightly grooved; whorls four, narrow, apical red, last with two calli between the margin of aperture and dorsal tumour; dorsal tumour moderately inflated, wrinkled; sutural callus rather lengthened; umbilicus very broad; margin of aperture double.

BLANFORD. Journ. Asi. Soc. Beng. 1865, Vol. XXXIV. p. 84.

Hab. Aracan Hills.

Species 32. (Fig. a, b, Mus. Hanley.)

ALYCEUS SCULPTILIS. *Alg. testâ subviridè-fulvâ, depresso-conicâ, sulcatâ; anfractibus quaternis, rotundis, apicalibus rubris, acuminatis; ultimo, inter marginem aperturæ et tumorem dorsalem angusto, equali sulcato, subelongato; tumore dorsali elongato, concinè marginato; callo suturali inconspicuo; umbilico latissimo; margine aperturæ duplicato, parte interno validè crenato.*

THE SCULPTURED ALYCEUS. Shell greenish-buff, depressed-conical, grooved; whorls four, rounded, apical red, acuminate; last narrowed between margin of aperture and dorsal tumour, narrow, equal, sulcated, rather lengthened; dorsal tumour elongated, neatly edged; sutural callus inconspicuous; umbilicus very broad; margin of aperture double, inner part strongly crenated.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 226.

Hab. Thyet Myo, near British Barmah.

Species 33. (Mus. Brit.)

ALYCEUS SPIRACELLUM. *Aly. testâ obscure fuscâ, depressâ, sulcatâ; anfractibus quaternis, angustis, apicalibus succineis; ultimo post aperturam breviter angustâ, levî; tumore dorsali mediocrî, margine crasso; umbilico longiusculo, collo suturali brevissimo, margine aperture complanato; umbilico lato.*

THE SPIRACLE ALYCEUS. Shell dull brown, depressed, grooved; whorls four, narrow, apical amber; last shortly narrowed behind the aperture, smooth; dorsal tumour medium-sized; margin thick; umbilicus rather narrow, sutural callus very short, margin of aperture flattened; umbilicus broad.

ADAMS AND REEVE. Voyage of the 'Sulphur.'

Hab. —?

Species 34. (Mus. Brit.)

ALYCEUS GRAPHICUS. *Aly. testâ pallidâ fideâ, conicâ, altâ; anfractibus quinîs, apicalibus levibus, penultimo lirato; ultimo et penultimo acutè liris, ultimo post aperture marginem levî, gradatim angustato; tumore dorsali inconspicuo; collo suturali brevî, conspicuo; umbilico minuto; aperture margine duplicato, parte externo ad juncturam anfractûs interrupto, subornito, parte interno tenui, paulo producto.*

THE GRAPHIC ALYCEUS. Shell pale fulvous, conical, high; whorls five, apical smooth, last and last

before sharply ridged, last smooth, gradually narrowed behind the margin of the aperture; dorsal tumour inconspicuous; sutural callus short, conspicuous; umbilicus minute; margin of aperture double, outer part interrupted at the juncture of the whorl, slightly aurited; inner part thin, a little produced.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Aracan Hills.

Species 35. (Mus. Brit.)

ALYCEUS FOOTEL. *Aly. testâ depressâ, albidâ, levî; anfractibus quaternis; ultimo post marginem aperture breviter angustato; tumore dorsali moderatè inflato, concinè marginato, rugato; aperture margine extis novis tribus plicato, infra columellam elevato.*

FOOTE'S ALYCEUS. Shell depressed, whitish, smooth; whorls four; last shortly narrowed behind the margin of the aperture; dorsal tumour moderately inflated, neatly bordered, wrinkled; margin of aperture plaited in three rings outside, cornered under the columella.

BLANFORD. —?

Hab. S. India.

Species 36. (Mus. Hanley.)

ALYCEUS UMBONALIS. *Aly. testâ majusculâ, depressâ, fuscâ, levî; anfractibus quinîs, apicalibus rubris; ultimo extenso, post aperture marginem angustato; tumoris; margine expanso, ad suturam elevato collo suturali elongato; margine aperture transversè ovato, latè planato, reflexo; umbilico maximo.*

THE UMBONAL ALYCEUS. Shell rather large, depressed, fawn, smooth; whorls five, apical red; last extended, elongated behind the aperture; margin of tumour expanded, raised at the suture; sutural callus elongated; margin of aperture transversely ovate, broadly flattened, reflected.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 225.

Hab. Akauktoung, near Inawaddy, Barmah.



38.



37.



39.



40. a



41.



42. b



43.



44.



45.



46.

ALYCEUS.

PLATE V.

Species 37. (Mus. Brit.)

ALYCEUS GEMMULA. *Alg. testâ minutâ, albâ, depressâ, tenuiter striatâ; ultimo anfractu post aperturam marginem angustâ, medio crassiusculo, tumore dorsali conicâ marginato, moderate inflato, rugatâ; callo suturali brevi, conspicuo; aperturæ margine duplicatâ, parte externâ planatâ, parte internâ productâ.*

THE LITTLE GEM ALYCEUS. Shell minute, whitish, depressed, finely striated; last whorl behind margin of aperture narrow, thickish in the middle, dorsal tumour neatly bordered, moderately inflated, wrinkled; sutural callus short, conspicuous; margin of aperture double, outer part flattened, inner part produced.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III. 1859.

Hab. Rungan Valley.

Species 38. (Mus. Brit.)

ALYCEUS AMILLATUS. *Alg. testâ lavi, depressâ-conicâ, albâ; ultimo anfractu, post aperturam breviter angustissimâ, tum latè callosâ, inflatâ; tumore dorsali subrecto, margine crasso, callosâ; callo suturali conspicuo, brevissimo, aperturæ margine angustâ; umbilico latissimo.*

THE COLLARED ALYCEUS. Shell smooth, depressed conical, whitish; last whorl shortly very narrow, callous behind the aperture, then broadly callous, inflated; dorsal tumour backward, margin thick, callous; sutural callus conspicuous, rather short, margin of the aperture narrow; umbilicus very broad.

BENSON. Ann. Nat. Hist. 1856, Ser. 2, Vol. XVII. p. 227.

Hab. Thyet Mya near river Irawaddy, Barmah.

Species 39. (Mus. Brit.)

ALYCEUS POLIUS. *Alg. testâ depressâ, politâ, castaneâ, subtilis albâ; ultimo anfractu post aperturam contractâ, tum longè inflatâ, ad marginem tumoris depressâ et callosâ, tumore dorsali inconspicuo, callo suturali albo, brevissimo; umbilico latâ; aperturæ margine infra columellam cuneatâ.*

THE POLISHED ALYCEUS. Shell depressed, polished, chestnut, whitish underneath; last whorl constricted behind the aperture, then with a long swelling, depressed and callous at the margin of the dorsal tumour; dorsal tumour inconspicuous; sutural callus white, very short, umbilicus broad; margin of aperture cornered below columella.

BLANFORD. Journ. Asi. Soc. Bengal, 1865.

Hab. Aracan.

Species 40. Fig. a, b. (Mus. Brit.)

ALYCEUS HUMILIS. *Alg. testâ parvâ, griseo-albâ, sulcato-striatâ, depressâ; ultimo anfractu inter aperturam et tumorem dorsalem inflatâ; tumore dorsali breviter conspicuè inflatâ, callo suturali brevissimo; umbilico latâ; margine aperturæ infra cuneatâ.*

THE HUMBLE ALYCEUS. Shell small, grey-white, groove-striated, depressed; last whorl inflated between aperture and dorsal tumour; dorsal tumour shortly conspicuously inflated, sutural callus rather short, umbilicus broad; margin of aperture cornered below.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Akaunktong, banks of Irawaddy.

Species 41. (Mus. Hanley.)

ALYCEUS CONTRACTUS. *Alg. testâ conicâ, albâ, fuscâ, brevissimâ; anfractibus quatuor, elevatis, tertio distanter breviter linito; ultimo post aperturam breviter angustissimâ; tumore dorsali brevi, conicâ marginato, callo suturali brevi; umbilico parvo; margine aperturæ latè reflexo.*

THE CONSTRICTED ALYCEUS. Shell conical, high, fulvous, rather smooth; whorls four, elevated, third distantly, slightly ridged; last shortly very narrow behind the aperture; dorsal tumour short, neatly bordered; sutural callus short; umbilicus small; margin of aperture broadly reflected.

BENSON. Ann. Nat. Hist., Ser. 2, Vol. VIII. p. 272.

Hab. Sikkim, Himalaya.

ALYCÆUS.—PLATE V.

Species 42. (Mus. Brit.)

ALYCÆUS PEMDEN. *Aly. testā albā, conicā, altā, lœvi; anfractibus quibus, ultimo post aperturam constricto tum inflato et constricto; tumore dorsali valdè inflato; callo suturali conspicuo, elongato; aperture margine duplicato; umbilico parvo.*

THE PEMDEN ALYCÆUS. Shell white, conical, high, smooth; whorls five, last constricted, then inflated and constricted behind the aperture; dorsal tumour much inflated; sutural callus conspicuous, elongated; margin of aperture doubled; umbilicus small.

BENSON. Ann. Nat. Hist., Ser. 3, Vol. III. 1859.

Hab. Darjeeling, Himalayas.

Species 43. (Mus. Hanley.)

ALYCÆUS CRENULATUS. *Aly. testā subdepressā, griseo-albā; anfractibus quaternis, ultimo post marginem aperture breviter, profundè constricto, tum valdè inflato, rugato; margine aperture crenulato; umbilico majusculo.*

THE CRENULATED ALYCÆUS. Shell subdepressed, grey-white; whorls four, last shortly, deeply, constricted, then much inflated, wrinkled; margin of aperture crenulated; umbilicus rather large.

BENSON. Ann. Nat. Hist., Ser. 3, Vol. III. 1859.

Hab. Rungan Valley.

Species 44. (Mus. Brit.)

ALYCÆUS THEOBALDI. *Aly. testā conicā, subdepressā, distanter liratā, griseo-albidā; ultimo anfractu*

crassiusculo, post aperturam breviter angusto, callo crasso annulato; tumore dorsali moderatè inflato, rugato; callo suturali elongato, angusto; umbilico latiusculo; margine aperture polygono.

THEOBALD'S ALYCÆUS. Shell conical, subdepressed, distantly ridged, grey-white; last whorl rather thick, shortly narrow behind the aperture, ringed with a thick callus; sutural callus long, narrow; umbilicus rather broad; margin of aperture polygonal.

BLANFORD. Journ. Asi. Soc. Bengal. 1862.

Hab. Khasi Hills.

Species 45. (Mus. Brit.)

ALYCÆUS EXPATRIATUS. *Aly. testā depressissimā, fulcā, tenuiter sulcatā; anfractibus apicalibus rubris, ultimo longè extenso, post aperturam marginem callo approximato et altero albo mediano extanti cincto; tumore dorsali albomarginato, valdè inflato; callo suturali breviusculo, conspicuo; umbilico lato; aperture margine tenuiter duplicato.*

THE EXPATRIATED ALYCÆUS. Shell very depressed, fulvous, finely grooved; apical whorls red, last considerably extended, girt behind the margin of the aperture with an approximate callus and another white medial, outstanding; dorsal tumour white-edged, strongly inflated; sutural callus rather short, conspicuous, umbilicus broad; margin of aperture thinly doubled.

BLANFORD. Journ. Asi. Soc. Bengal. 1860, Vol. XXIX. p. 123.

Hab. Nilgherries.



47.



48.



49.



50.



50, a.



50, b.



51.



52.



53.



53.

ALYCÆUS.

PLATE VI.

Species 46. (Mus. Brit.)

ALYCÆUS STYLIER. *Aly. testâ compressâ, pallide fulvâ, lateraliter distortâ; apice acuminatâ; ultimo anfractu distanter bimarginato, tumore dorsali latè inflato, rugato; callo suturali brevissimo; umbilico latissimo.*

THE STYLIER ALYCÆUS. Shell compressed, pale fulvous, laterally distorted; apex acuminate; last whorl with two distant margins; dorsal tumour broadly inflated, wrinkled; sutural callus rather short; umbilicus very broad.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.
Hab. Sikkim, Himalaya.

Species 47. (Mus. Brit.)

ALYCÆUS STRANGULATUS. *Aly. testâ depressâ, fulvâ, leviter striatâ; ultimo anfractu post marginem aperturæ profundè contracto, tum. callo crasso prominenti irregulari armato; tumore dorsali brevi; callo suturali brevissimo; umbilico latissimo; margine aperturæ duplicato.*

THE STRANGLED ALYCÆUS. Shell depressed, fulvous, finely striated; last whorl deeply contracted behind margin of aperture, then armed with a prominent irregular callus; dorsal tumour short; sutural callus rather short; umbilicus rather broad; margin of aperture double.

HUTTON. MSS. Pflr. Zeitschrift Malak. 1846.
Hab. Landour.

Species 48. (Mus. Theobald.)

ALYCÆUS BIFRONS. *Aly. testâ pallide fulvâ, depressâ, lavi; angustibus apicalibus rubris; ultimo anfractu post aperturam longè angustato, callo annulari, et callo albo irregulari prominenti interrupto; tumore dorsali brevi; callo suturali brevissimo; umbilico lato; margine aperturæ tenuissimo.*

THE TWO-LEAVED ALYCÆUS. Shell pale, fulvous, depressed, smooth; apical whorls red; last whorl with a narrow length behind the aperture, inter-

rupted by an annular and irregular, prominent callus; dorsal tumour short; sutural callus rather short; umbilicus broad; margin of aperture rather thin.

THEOBALD. Journ. Asi. Soc. Bengal, 1870, Vol. XXXIX. Pl. 2, p. 396.

Hab. Shan States.

Species 49. (Mus. Brit.)

ALYCÆUS PROSECTUS. *Aly. testâ depresso-conicâ, pallide fulvâ, irregulariter sulcatâ et liratâ; ultimo anfractu distorto subgloboso, post aperturam marginem breviter angustato, declivi, corinato; tumore dorsali longè inflato; aperturæ margine albo, latè reflexo supra infraque subaurito; umbilico lato; callo suturali longissimo.*

THE SLASHED ALYCÆUS. Shell depressed, conical, pale fulvous, irregularly grooved and ridged; last whorl distorted, subglobose, shortly narrowed behind margin of aperture, sloped, keeled; dorsal tumour lengthily swelled; margin of aperture white, broadly reflected, subaurited above and below; umbilicus broad; sutural callus rather long.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.
Hab. Khasi Hills.

Species 50. (Fig. a, b, Mus. Brit.)

ALYCÆUS FUGORI. *Aly. testâ conicâ, acuminatâ, sulphureâ, ultimo anfractu ventricoso, lateraliter et dorso valdè inflato; post aperturam breviter angustato, tumori dorsali subito et conspicuo; callo suturali brevissimo; aperturâ angustè reflexâ.*

THE FUGOR ALYCÆUS. Shell conical, acuminate; sulphur, last whorl ventricose laterally at the back, much inflated, shortly narrowed behind the aperture; dorsal tumour sudden and conspicuous; sutural callus very short; aperture narrow, reflected.

MARTENS. —? MS. Mus. Brit.

Hab. —?

Species 51. (Mus. Brit.)

ALYCÆUS PHYSIS. *Aly. testā majusculā, depresso-conicā, griseo-albidā, levi, ultimo anfractu lateraliter extenso; post aperturam distorto, breviter angustato; tumore dorsali concinnè marginato, latè inflato; callo suturali elongato; umbilico nuncino; margine aperturæ angustè reflexo.*

THE PHYSIS ALYCÆUS. Shell rather large, depressed-conical, greyish white, smooth, last whorl laterally distorted, shortly narrowed behind the aperture; dorsal tumour neatly bordered, broadly inflated; sutural callus elongated; umbilicus very large; margin of aperture narrowly reflexed.

BENSON. Ann. Nat. Hist. Ser. 3, Vol. III. p. 179.

Hab. Rungun Valley, near Darjeeling.

Species 52. (Mus. Hanley.)

ALYCÆUS HERBES. *Aly. testā, depresso-conicā, levi, pallidè castaneā; ultimo anfractu post marginem aperturæ constricto, callo irregulari retrorsum tortuo munito; tumori dorsali breviusculo, margine albo; callo suturali longiusculo; umbilico majusculo; aperturæ margine angusto.*

THE DULL ALYCÆUS. Shell depressed-conical, smooth, pale chestnut; last whorl constricted behind margin of aperture, strengthened with an irregular backward twisted callus; dorsal tumour rather short, with white margin; sutural callus rather long; umbilicus rather large; margin of aperture narrow.

BENSON. Ann. Nat. Hist. Ser. 2, Vol. XIX. 1857.

Hab. Khasia Hills.

Species 53. (Mus. Brit.)

ALYCÆUS STOLITZKII. *Aly. testā albidā, tenuissimè striatā, subdepressā; ultimo anfractu post marginem bilirato, tūm longè angustissimo; tumore dorsali concinnè marginato; callo suturali conspicuo, elongato; umbilico magno.*

STOLITZSKY'S ALYCÆUS. Shell whitish, very finely striated, subdepressed; last whorl with double ridge behind aperture, then with a lengthened very narrow space; dorsal tumour neatly bordered; sutural callus conspicuous, elongated; umbilicus large.

GODWIN AUSTIN. —? MS. Brit. Mus.

Hab. Nagor Hills.

Species 54. (Mus. Brit.)

ALYCÆUS INGRAMI. *Aly. testā depressā, albidiā; ultimo anfractu lateraliter extenso, post aperturam brevissimè contracto; tumore dorsali ad aperturam subapproxinato; callo suturali elongato, conspicuo; umbilico latissimo.*

INGRAM'S ALYCÆUS. Shell depressed, whitish; last whorl laterally extended, very shortly contracted behind the aperture; dorsal tumour rather near the aperture; sutural callus lengthened, conspicuous; umbilicus very wide.

BLANFORD. Journ. Asi. Soc. Bengal, 1862.

Hab. Aracan.

ALYCÆUS.

	Plate.	Species.		Plate.	Species.
amphora, <i>Benson</i>	II.	15	<i>margaritus</i> , <i>Theobald</i>	IV.	28
Andamaniae, <i>Benson</i>	II.	10	<i>margaritus</i> , <i>Theobald</i>	I.	7
armillatus, <i>Benson</i>	V.	38	microstoma, <i>Sowerby</i>	IV.	28
Ave. <i>Blanford</i>	III.	20	Monhoti, <i>Adams</i>	III.	19
Bacsi, <i>Fletcher</i>	III.	26	Nieobaricus, <i>Morch—l</i>	IV.	29
bembex, <i>Benson</i>	V.	42	nitidus, <i>Blanford</i>	III.	25
bifrons, <i>Theobald</i>	VI.	48	otiphorus, <i>Benson</i>	IV.	30
Burtii, <i>Godwin Austin</i>	III.	27	physis, <i>Benson</i>	VI.	51
conicus, <i>Godwin Austin</i>	I.	9	plectocheilus, <i>Benson</i>	II.	41
constrictus, <i>Benson</i>	V.	41	politus, <i>Blanford</i>	V.	39
crenatus, <i>Godwin Austin</i>	I.	1	polygonus, <i>Blanford</i>	II.	11
crenulatus, <i>Benson</i>	V.	43	prosectus, <i>Benson</i>	VI.	49
encollatus, <i>Theobald</i>	II.	12	pusillus, <i>Godwin Austin</i>	I.	7
diagonus, <i>Godwin Austin</i>	I.	2	pyramidalis, <i>Benson</i>	I.	6
distortus, <i>Holmes</i>	III.	24	Richtofeni, <i>Blanford</i>	III.	23
expatriatus, <i>Blanford</i>	V.	45	sculptilis, <i>Benson</i>	IV.	32
Feddenianus, <i>Theobald</i>	II.	18	spiracellum, <i>Adams and Reece</i>	IV.	33
Footi, <i>Blanford</i>	IV.	35	Stolitzkii, <i>Godwin Austin</i>	VI.	53
Fugori, <i>Martens</i>	VI.	50	strangulatus, <i>Hutton</i>	VI.	47
gemmula, <i>Benson</i>	V.	37	stylifer, <i>Benson</i>	VI.	46
gibbus, <i>Fletcher</i>	I.	4	succineus, <i>Blanford</i>	II.	16
glaber, <i>Blanford</i>	IV.	31	Swinhoei, <i>H. Adams</i>	III.	21
graphicus, <i>Blanford</i>	IV.	34	Theobaldi, <i>Blanford</i>	V.	44
hebes, <i>Benson</i>	VI.	52	umbonalis, <i>Benson</i>	IV.	36
humilis, <i>Blanford</i>	V.	40	urnula, <i>Benson</i>	II.	13
lucanus, <i>Blanford</i>	VI.	54	vestitus, <i>Blanford</i>	I.	3
Khasianus, <i>Godwin Austin</i>	I.	8	Vulcani, <i>Blanford</i>	II.	17
Kurziannus, <i>Theobald</i>	III.	22			

MONOGRAPH

OF THE GENUS

M A R G A R I T A .

Of Nature's gifts thou may'st with lilies boast,
And with the half-blown rose,—*Shakspere.*



2



1



3



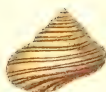
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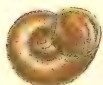
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7



10

MARGARITA.

PLATE I.

Genus MARGARITA. Leach.

Testa subtrochiformis, vel heliciformis, intus et sub tegumentum externum marginitacea, interdum umbilicata, internum clausa. Apertura magna, simplex. Operculum cornuum, subovatum, paucispirale.

Shell trochus- or helix-shaped, pearly inside and beneath the external tegument, sometimes umbilicated, sometimes closed. Aperture large, simple. Operculum horny, subovate, few-whorled.

This genus consists of a few shells that have been grouped together, as having some affinities, but no very definite uniting characters. In the work by Messrs. Adams they are separated into two genera, and other species have been added to each. In the original genus there are umbilicated and non-umbilicated examples; the former are allowed in that work to retain the name now used, while the latter are named 'Photinula.' This plate having been published in a former number, the writer now completes the monograph, including both sections, as left by his late father, in the Conchological Illustrations, with a few additions from specimens in the collection of the British Museum.

Species 1. (Fig. a, b, Mus. Brit.)

MARGARITA UMBILICALIS. *Mar. testâ magnâ, tenui levigatâ, fulvâ, obliquâ; umbilico latissimo, apertura maximi, obliquâ, intus splendentè iridescenti; ultimo anfractu lato, obscurissimè angulato.*

THE UMBILICAL MARGARITA. Shell large, thin, smooth, fulvous, oblique, umbilicus very broad, aperture very large, oblique, splendidly iridescent within; last whorl broad, very obscurely angular.

BRODERIP. Sowerby Con. Ill., p. 13.

Hab. — ?

Species 2. (Mus. Brit.)

MARGARITA UNDULATA. *Mar. testâ fulvâ, parvâ, depressâ, spiritaliter striatâ, ad suturam undulatâ; ultimo anfractu lato; apertura magnâ, obliquâ; umbilico angusto, albo.*

THE WAVY MARGARITA. Shell fulvous, small, depressed, spirally striated, waved at the suture; last whorl broad; aperture large, oblique; umbilicus narrow, white.

SOWERBY. Mal. and Conch. Mag. Conch. Ill. Species 12, f. 4.

Hab. Massachusetts Bay.

Species 3. (Mus. Brit.)

MARGARITA SULCATA. *Mar. testâ albâ, depressâ subtilis levi, suprâ spiritaliter liratâ; apertura latâ; umbilico lato, subcarinato.*

THE GROOVED MARGARITA. Shell white, depressed, smooth beneath, spirally ridged above; aperture broad; umbilicus broad, subcarinated.

SOWERBY. Mal. and Conch. Mag. p. 26.

Hab. — ?

Species 4. (Fig. a, b, Mus. Brit.)

MARGARITA TENIATA. *Mar. testa trochiformi, fulvâ, fasciis rubris tenuiatâ, levigatâ; spirâ conicâ, anfractibus quinis, rapidè crescentibus, ultimo magno; apertura magnâ, columellâ albâ, crassâ obliquâ, infrâ subcuneatâ.*

THE RIBBAND MARGARITA. Shell trochus-shaped, fulvous, banded with red stripes, smooth, spire conical, whorls five, rapidly increased, last large; aperture large, columella white, thick, oblique, slightly cuneate below.

SOWERBY. Conch. Illus. Species 1, fig. 2.

Hab. Falkland Islands.

Species 5. (Fig. a, b, Mus. Brit.)

MARGARITA VIOLACEA. *Mar. testâ crassiusculâ, rubrâ, obliquâ, levi, non umbilicatâ; anfractibus trinis, rapidè crescentibus; ultimo magno, subdepresso, infrâ planiusculâ; apertura magnâ, obliquâ.*

THE VIOLET MARGARITA. Shell rather thick, red, oblique, smooth, not umbilicated; whorls three, rapidly enlarged; last large, somewhat depressed, rather flattened below; aperture large, oblique.

KING. Zool. Journ. Vol. V. p. 346.

Hab. — ?

MARGARITA.—PLATE I.

Species 6. (Mus. Brit.)

MARGARITA GREENLANDICA. *Mar. testâ subdepressâ, albidâ, levigatâ; anfractibus trivis, depressis; ultimo expanso; aperturâ magnâ, columellâ tenui, umbilico lato.*

THE GREENLAND MARGARITA. Shell rather depressed, whitish, smooth; whorls three, depressed; last expanded; aperture large, columella thin, umbilicus broad.

BECK. Sowerby, Conch. III. f. 10.

Hab. Greenland.

Species 7. (Mus. Brit.)

MARGARITA STRIATA. *Mar. testâ trochaeformi, fideâ, spiraliter striatâ, suprâ liratâ; spirâ conicâ, anfractibus quinâ, ultimo magnâ; aperturâ rotundâ; umbilico parvo.*

THE STRIATED MARGARITA. Shell trochus-shaped, fulvous, spirally striated; ridged above; spire conical, whorls five, last large; aperture rounded; umbilicus small.

BRODERIP. Zool. Journal IV. Con. III. f. 3.

Hab. Northern Ocean?

The larger figure in the Conchological Illustrations, fig. 18, represents a different species, which will be found under the name, *Margarita mazima* in Plate III.





MARGARITA.

PLATE II.

Species 8. (Mus. Brit.)

MARGARITA SANDWICHIANA. *Mar. testâ subglobosâ, griseo-fulcâ, spirâliter striatâ, maculis fuscis nigrescentibus tessellatis cariegatâ; anfractibus trinis, ultimo magno, subgloboso; aperturâ subrotundâ, columellâ crassiusculâ, obliquâ; umbilico lato.*

THE SANDWICH ISLANDS MARGARITA. Shell subglobose, greyish fulvous, spirally striated, variegated with blackish-brown tessellated spots; whorls three, last large, subglobose; aperture rather round; columella rather thick, oblique; umbilicus broad.

A. ADAMS. — ? MS. Mus. Brit.

Hab. Sandwich Islands.

Species 9. (Mus. Brit.)

MARGARITA VULGARIS. *Mar. testâ parvâ, obliquâ, depressâ, albâ, lavi; anfractibus trinis, ultimo rapidè crescenti; aperturâ magnâ, declivi; columellâ tenui; umbilico parvo.*

THE COMMON MARGARITA. Shell small, oblique, depressed, whitish, smooth; whorls three, last quickly increased; aperture large, sloped; columella thin; umbilicus small.

LEACH, SOWERBY. *Conch. Ill. Sp.* 5. f. 13.

Hab. Northern Seas.

Species 10. (Mus. Brit.)

MARGARITA SIGARETTINA. *Mar. testâ obliquè depressâ, crassiusculâ, subheliotoidea, rubrâ, levigatâ, intus splendide iridescenti; aperturâ obliquè ovatâ, maximi; columellâ albâ, latâ, planulatâ, per-obliquâ.*

THE SIGARETTA-LIKE MARGARITA. Shell obliquely depressed, rather thick, rather heliotois-shaped, red, smooth, splendidly iridescent within; aperture obliquely ovate, very large; columella white, broad, flattened, very oblique.

SOWERBY. *Mal. and Conch. Mag.* p. 24; *Con. Ill. f.* 14.

Hab. — ?

Possibly a further knowledge of this species may lead to its placement in the *GENA* group.

Species 11. (Mus. Brit.)

MARGARITA PULCHERRIMA. *Mar. testâ altâ, trochæformi, subtiliter spirâliter liratâ, inter liris regulariter striatis; liris minutè moniliferis, rubro maculatis; umbilico magno, carinato; columellâ obliquâ.*

THE VERY PRETTY MARGARITA. Shell raised, trochus-shaped, rather distantly spirally ridged, between the ridges regularly striated; ridges minutely beaded, spotted with red; umbilicus large, keeled; columella oblique.

A. ADAMS. — ?

Hab. Japan.

Species 12. (Mus. Brit.)

MARGARITA CERULESCENS. *Mar. testâ cinereâ, depressâ, non umbilicatâ, levigatâ, angustè truncatâ; spirâ depresso-conicâ; aperturâ obliquè submoderatâ; columellâ crassâ, latâ, superâe validè arcuatâ.*

THE BLUEISH MARGARITA. Shell ash-coloured, depressed, not umbilicated, smooth, narrowly banded; spire depressed-conical, aperture obliquely squarish; columella thick, broad, strongly arched above.

KING. — ? MS. Brit. Mus.

Hab. — ?

This species belongs to the *Photinula* group.

Species 13. (Mus. Brit.)

MARGARITA ACUMINATA. *Mar. testâ cinereo-albâ, altâ, conicâ, acuminatâ; anfractibus quinis, ultimo maximo, subangulatâ; aperturâ magnâ, columellâ tenui, umbilico angustissimo.*

THE ACUMINATED MARGARETTA. Shell ashy white, high, conical, acuminate; whorls five; last very large, slightly angular; aperture large; columella thin; umbilicus very narrow.

SOWERBY. *Mal. and Conch. Mag.* p. 26. *Con. Ill. f.* 7.

Hab. — ?

Species 14. (Mus. Brit.)

MARGARITA PUNCTATA. *Mar. testâ elevatâ, conicâ, fulcâ; anfractibus sexis turritis, suturâ profundâ*

MARGARITA.—PLATE II.

separatis, ultimo supernè bicostrato, costis rubro maculatis, infra striato; umbilico maximo; costato, aperturâ parvâ.

THE SPOTTED MARGARITA. Shell raised, conical fulvous; whorls six, turreted, separated by a deep suture, last with two ribs above, ribs spotted with red; striated below; umbilicus very large, ribbed; aperture small.

A. ADAMS. — ? MS. Brit. Mus.

Hab. Japan.

Species 15. (Mus. Brit.)

MARGARITA HELICINA. *Mar. testâ parvâ, tenui, roseo-fulvâ, subdepressâ, aperturâ magnâ, umbilico angustissimo, columellâ arcuatâ.*

THE HELICINA MARGARITA. Shell small, thin, pinky-fulvous, rather depressed, aperture large; umbilicus rather narrow, columella arched.

FABRICIUS. Vide Proc. Zool. Soc. 1851.

Hab. -

Species 16. (Mus. Brit.)

MARGARITA ARGENTATA. *Mar. testâ depresso-globosâ, albiddâ, levî; anfractibus trinis, ultimo maximo, supernè subcarinato; aperturâ magnâ, umbilico majusculo, columellâ arcuatâ.*

THE SILVERY MARGARITA. Shell depressed-globose, whitish, smooth; whorls three, last large, with a slight keel above; aperture large, umbilicus rather large, columella arched.

GOULD. Invert. Mass. p. 256, f. 164.

Hab. Cape Ann.

Species 17. (Mus. Brit.)

MARGARITA ZELANDICA. *Mar. testâ depresso-conicâ, spiraliter sulcatâ, rubro punctatâ; ultimo anfractu subtilis complanato; umbilico lato, carinato; aperturâ parvâ, columellâ validâ, infra subcuneatâ.*

THE ZEALAND MARGARITA. Shell depressed-conical, spirally grooved, spotted with red; last whorl flattened beneath; umbilicus broad, keeled; aperture small, columella strong, slightly cuneate below.

HUTTON. — ? MS. Mus. Brit.

Hab. New Zealand.





MARGARITA.

PLATE III.

Species 18. (Mus. Brit.)

MARGARITA INCAENATA. *Mar. testâ depresso-conica, rubescenti, liris moniliferis sculptâ; ultimo anfractu magno, propè suturam concentricè rugato; aperturâ magis; umbilico mediocri.*

THE FLESH-COLOURED MARGARITA. Shell depressed-conical, reddish, sculptured with beaded ridges; last whorl large, concentrically wrinkled near the suture; aperture large; umbilicus middle-sized.

CORTHROY. — ? (Ms. Brit. Mus.)

Hab. N. America.

Species 19. (Mus. Brit.)

MARGARITA ARCTICA. *Mar. testâ parvâ, brevi, depressâ, fulvo-griseacenti; ultimo anfractu obliquo, expanso, aperturâ maximi, obliquè ovati; umbilico magno.*

THE ARCTIC MARGARITA. Shell small, smooth, depressed, greyish-fulvous; last whorl oblique, expanded; aperture very large, obliquely ovate; umbilicus large.

LEACH. Sowerby. *Conch.* III. fig. 6.

Hab. Plymouth, Massachusetts.

Species 20. (Mus. Brit.)

MARGARITA COSTELLATA. *Mar. testâ depressâ, subarctâ; anfractibus subnullis, ultimo biangulato, inter angulos spiralliter striato, infusè subplanulato; aperturâ subquadratâ; umbilico parvo, angulato, obliquè carinato.*

THE RIBBED MARGARITA. Shell depressed, slightly gold-tinted; whorls subreticulated, last biangular, spirally striated between the angles, rather flattened below; aperture rather square; umbilicus small, angular, obliquely keeled.

OWERBY. *Mal. & Conch. Mag.* p. 26.

Hab. — ?

Species 21. (Mus. Brit.)

MARGARITA CORNEA. *Mar. testâ trochiformi, acuminatâ, fulvo-albidâ, spiralliter liratâ; anfractibus senis, altis, angulatis, ultimo obscure biangulato, umbilico spiralliter costato, lato; aperturâ subrotundâ, margine crenato; columella arcuata.*

THE HORN MARGARITA. Shell trochus-shaped, acuminate, whitish-buff, spirally ridged; whorls six, raised, angular, last obscurely biangular; umbilicus spirally ribbed, broad; aperture rather rounded, margin crenulated; columella arched.

KIENER *Icon. pl.* 196, fig. 2.

Hab. — ?

Species 22. (Mus. Brit.)

MARGARITA CARINATA. *Mar. testâ roseo-fulvâ, elevatâ, conicâ, acuminatâ; anfractibus senis, elevatis, angulatis; ultimo propè suturam concentricè liratâ, tum tricarinato, inter carinas liratâ; infusè subplanulato; umbilico magno, margine carinato; aperturâ subtriangulâ; columellâ obliquâ.*

THE KEEL MARGARITA. Shell pinkish-fulvous, raised, conical, acuminate; whorls six, raised, angular; last concentrically ridged near the suture, then with three keels, rather flattened below; umbilicus large, margin keeled; aperture rather trigonal; columella oblique.

A. ADAMS. *Proc. Zool. Soc.* 1851, 190.

Hab. Calbalonga, Philippines.

Species 23. (Mus. Brit.)

MARGARITA MODESTA. *Mar. testâ trochiformi, pallidâ carneâ, carinatâ, subtilis striatâ; anfractibus quater senis, ultimo magno, angulato; umbilico parvo; aperturâ mediocri, columellâ subobliquâ, tenuiusculâ.*

THE MODEST MARGARITA. Shell trochus-shaped, pale flesh-coloured, keeled, striated below. Whorls four, last large, angular; umbilicus small; aperture middle-sized, columella rather oblique, rather thin.

MIDDELDORF. — ? *Ms. (Brit. Mus.)*

Hab. — ?

Species 24. (Ms. — ? copied.)

MARGARITA MAXIMA. *Mar. testâ magis, trochiformi, fulvâ; spirâ conicâ; anfractibus senis, ultimo maximo, superè quinque-carinato, infusè striato, umbilico lato, margine carinato; aperturâ obliquâ quadrilaterali, columellâ arcuatâ, infusè crenulatâ.*

MARGARITA.—PLATE III.

THE VERY LARGE MARGARITA. Shell large, trochus-shaped, fulvous; spire conical, whorls six; last very large, five-keeled above, striated below; umbilicus broad, margin keeled; aperture obliquely four sided, columella arched, cuneate below, crenulated.

SOWERBY.

Hab. — ?

The writer has not seen the specimen since first figuring it in the Conchological Illustrations, but is of opinion that it must be distinct from *M. striata*.

Species 25. (Mus. Brit.)

MARGARITA ASPECTA. *Mar. testâ conicâ, acuminatâ, fulvo-rubescenti, spiralliter multi-carinatâ, intercarinis concentricè minutè liratâ, carinis moniliferis; anfractibus angulatis; umbilico lato.*

THE PRESENTABLE MARGARITA. Shell conical, acuminate, reddish fulvous, spirally, many-keeled, concentrically minutely ridged between the keels; keels beaded; whorls angular; umbilicus broad.

A. ADAMS. Proc. Zool. Soc. 1854, p. 40.

Hab. Australia.

A very beautifully sculptured, trochus-shaped shell.

Species 26. (Mus. Brit.)

MARGARITA TRIANGULOSA. *Mar. testâ crassâ, subroseo-albidâ, fusco variegatâ; anfractibus subdepressis, angulatis, ultimo propè suturam et medio angulato; umbilico lato, margine carinato; aperturâ supernè et medio angulatâ.*

THE TRIANGULAR MARGARITA. Shell thick, pinkish-white, variegated with brown; whorls somewhat depressed, angular, last angular near the suture, and in the middle; umbilicus broad, margin keeled; aperture angular above and in the middle.

A. ADAMS. Proc. Zool. Soc. 1854, p. 40.

Hab. Siam.

Species 27. (Fig. a, b, Mus. — ? copied.)

MARGARITA SOLARIIFORMIS. *Mar. testâ purâ, depressâ, fulvâ, angulatâ; anfractibus trinis, ultimo depresso, medio angulato; umbilico angulato, margine carinato; aperturâ latâ, columellâ albâ, rectiusculâ.*

THE SOLARIUM-SHAPED MARGARITA. Shell small, depressed, angular; whorls three, last depressed, angular in the middle; umbilicus angular, margin keeled; columella white, rather straight.

SOWERBY. Mal. and Conch. Mag. p. 26. Con. Ill. f. 8.

Hab. — ?

It has very much the appearance of a miniature solarium.

MONOGRAPH
OF THE GENUS
R O T E L L A.

To God, who all creation made,
The frequent hymn be duly paid.
Alleluia, Alleluia! — *Nath*



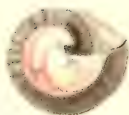
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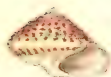
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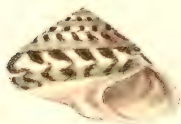
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4^b



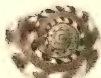
5^b



5^a



5^b



3^c

ROTELLA.

PLATE I.

Genus ROTELLA. *Lamarell.*

Testa trochiformis, depressa, orbicularis, solida, superne conica, infra lenticularis, intus nuda; umbilico per callum oblecto; apertura subtrigona, transversa, operculum corneum, multispirale planorbicular.

Shell trochiform, depressed, orbicular, solid, conical above, lenticular beneath, pearly within; umbilicus covered in by a callus; aperture rather trigonal, transverse, operculum horny, planorbicular.

SYS. Umbonium, Link.

The few species to be found towards the end of this monograph which are placed in the British Museum collection under the generic heading of *Ethalia*, do not so well agree with the above description as the more typical *R. vestuaria*. Yet the passage is not very abrupt, and it seems hardly necessary to keep up a distinction upon characters of so little generic importance. The species alluded to are *R. guineensis*, and several others allied to it. The East Indies appear to be the home of the *R. vestuaria*, although varieties of that species are quoted from the Mediterranean. *R. elegans* is from the Philippines, and a variety from the Martinique. *R. gigantea* and other fine species are from Japan.

Species 1. (Mus. Brit.)

ROTELLA CONICA. *Rot. testâ fusco-purpureascenti, crassi, conicâ, callu centrali parvo, fusco-fumoso, spiritaliter disposito, medio depresso, ultimo anfractu circa callum centralia depresso.*

THE CONICAL ROTELLA. Shell purplish-brown, thick, conical; ventral callus small, smoky-brown, spirally deposited, depressed in the middle; last whorl depressed round the ventral callus.

ADAMS & REEVE. Voy. Samarang. Proc. Zool. Soc. 1854.

Hab. — ?

In this dark but richly-coloured shell the form of the callus is peculiar, being formed of semicircular layers placed spirally. It is small, defined, and does not quite occupy the central hollow of the shell.

Species 2. (Fig. a, b, [c, in Plate II.] Mus. Brit.)

ROTELLA DEPRESSA. *Rot. utrinque lenticulari, depressi; anfractibus rapidè crescentibus, ultimo ad marginem rotundo, superne medio latè fasciato, fasciâ margine regulariter punctato, vel fasciis radiatis variegata; collo expanso, griseo, lenticulari.*

THE DEPRESSED ROTELLA. Shell lenticular on both sides, depressed; whorls rapidly increased, last rounded at the margin, with a broad band in the middle above, margin of band regularly spotted, or variegated with rayed bands; callus expanded, grey, lenticular.

A. ADAMS — ? MS. Cum. Coll.

Hab. — ?

Like *Rotella vestuaria*, but with the last whorl more spread.

Species 3. (Fig. a, b, c, Mus. Brit. and Sowerby.)

ROTELLA GIGANTEA. *Rot. testâ altiusculâ, superne conicâ, infra subcomplanatâ; superiorem medium tenaciter spiritaliter striatâ, griseâ, maculis magnis obliquis nigrescentibus ad suturam et ad angulum ornatâ, aut griseâ immaculatâ; anfractibus propriâ suturam depressis, suturâ profundâ; collo irregulari, roseo, post columellam angulatum tumido; columellâ crassissimâ, latâ; labio externo superne protracto et depresso.*

THE GIGANTIC ROTELLA. Shell rather high, conical above, rather flattened below; above the middle, thinly spirally striated, grey, ornamented with large oblique black spots at the suture and at the angle, or grey without spots; whorls near the suture depressed, suture deep; callus irregular, pink, angularly tumid behind the columella; columella very thick, broad; outer lip produced and depressed above.

LESSON. Illust. Zool. Pl. 17.

Hab. Japan.

Species 4. (Fig. a, b, Mus. Brit.)

ROTELLA COSTATA. *Rot. testâ superne conicâ, altiusculâ, infra planiusculâ, anfractibus ad suturam leviter decatis tum subdepressis, sulcis spiritaliter*

ROTELLA.—PLATE I.

incisis sculptis fusco-grisescenti fasciis variegatis; infra angulum lrvigatis; callo rubescenti, columellâ crassi.

THE RIBBED ROTELLA. Shell conical, rather high above, rather flat below; whorls slightly elevated at the suture, then rather depressed; sculptured with spiral incised grooves, variegated with greyish brown in bands; smooth beneath the angle, callus pink; columella thick,

VALENCIENNES. Kienér, Icon. Coq. Viv. Pl. II. f. 5.

Hab. Japan.

Species 5. (Fig. a, b. Mus. Brit.)

ROTELLA MONILIFERA. *Rot. testâ superne conicâ altâ, anfractibus spiraliter costatis, ad suturam in costam noduliferam elevatis, griseis fusco variegatis; callo pleno, grisescenti, columellâ obliquâ.*

THE BEADED ROTELLA. Shell conical above, high, whorls spirally ribbed, raised at the suture into a beaded rib, grey, varied with brown; callus full, greyish, columella oblique.

LAMARCK. Sowerby's Genera, No. 14.

Hab. — ?



6a



6c



6b



7



6e



6d



8



6f



9



6g

ROTELLA.

PLATE II.

(Fig. 3, c, Mus. Brit.)

ROTELLA DEPRESSA. Var. See Plate I.

Species 6. (Fig. a, b, c, d, Mus. Brit. & Sowerby.)

ROTELLA ELEGANS. *Rot. testâ supernè, altâ, conicâ; anfractibus obliquè planatis, variè fasciis maculisque pictis, subtilis planiusculis; callo crasso, subæqualiter convexo.*

THE ELEGANT ROTELLA. Shell high, conical above; whorls obliquely flattened, variously painted with bands and spots, rather flat beneath; callus thick, rather equally convex.

BECK. Kiener Icon. Coq. Viv. Pl. II. f. 5.

Hab. Philippines.

Most varieties of this species show a black spiral line on the edges of the whorls, and the whorls are slightly flattened. In *Rotella vestiaria* the black line does not occur, and the whorls are fewer and a little convex.

Species 7. (Mus. Brit.)

ROTELLA SUTURALIS. *Rot. testâ depresso-conicâ, lineis strigisque fasciis variegatâ, spiritaliter sulcis numerosis sculptâ; anfractibus supernè planatis, ad suturam in costam elevatis; suturâ profundâ; callo lato, rubro.*

THE SUTURED ROTELLA. Shell depressed conical, variegated with brown lines and stripes, spirally sculptured with numerous grooves; whorls flattened above, raised in a rib at the suture; suture deep; callus broad, red.

LAMARCK. Chén. Conch. Cab. Pl. 19. f. 186-7.

Hab. Indian Seas.

More closely sculptured than *Rotella costata*, and with the whorls more raised at the suture.

Species 8. (Mus. Brit.)

ROTELLA JAVANICA. *Rot. testâ altâ, conicâ, ad suturam moniliferâ; anfractibus supernè subcomplanatis, suprâ angulum lineis spiralibus ornatis, subtus angulum interruptim fasciatâ; callo ventrali crasso, griseo-fusco.*

THE JAVA ROTELLA. Shell high, conical, beaded at the suture; whorls rather flattened above, ornamented with spiral lines above the angle, and an interrupted band below the angle; ventral callus thick, greyish-brown.

LAMARCK. Anim. S. Vert.

Hab. Java.

Species 9. (Mus. Brit.)

ROTELLA SAGITTATA. *Rot. testâ subdepressâ, supernè conicâ, maculis sagittatis nigris in series spirales dispositis ornata, subtilis vix convexâ; callo parco, albo, circumscripto.*

THE ARROW-HEADED ROTELLA. Shell sub-depressed, conical above, ornamented with arrow-head black spots placed in spiral rows, hardly convex below; callus small, white, circumscribed.

HINDS. Voy. Sulphur.

Hab. — ?

This pretty little shell differs from *R. elegans* chiefly in the arrow-headed markings and the circumscribed callus.



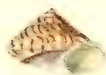
101.



102.



103.



104.



105.



106.



107.



108.



109.



110.

ROTELLA.

PLATE III.

Species 10. (Fig. a, b, c, Mus. Sowerby.)

ROTELLA INFERPLANATA. *Rot. testâ supernè conicâ, altâ, infrâ subconcaâ; anfractibus supernè planatis, varîè pictis, infrâ angulum circâ callum centalem griseo cariegatâ; callo parvo, subconcaâ; columellâ obliquâ, ad terminum angulatum.*

THE FLAT-BOTTOMED ROTELLA. Shell conical above, high, almost concave; whorls flattened above, variously painted, variegated with gray; callus small, rather concave; columella oblique, angular at the end.

SOWERBY.

Hab. —?

We have several varieties of this conical shell. The upper part is like *R. elegans*, with greater elevation, but the lower is much more flattered than that or any other species.

Species 11. (Mus. Brit.)

ROTELLA ZELANDICA. *Rot. testâ albâ, conicâ, rubescenti, fusco-rubescenti radiatim strigatâ, ad angulum spiraliter tri-liratâ; anfractibus infrâ suturam subconcaâ, subtilis convexâsculis; callo ventrali griseo-rubescenti, purpureo circumscripto.*

THE NEW ZEALAND. Shell high, conical, reddish, radiately striped with reddish-brown, spirally three-ridged at the angle; whorls rather concave below the suture, rather convex underneath; ventral callus reddish-grey, circumscribed with purple.

A. ADAMS.

Hab. New Zealand.

Species 12. (Mus. Brit.)

ROTELLA VESTIARIA. *Rot. testâ depressâ, fasciis, strigis, maculisque varîè pictâ; anfractibus supernè subconcaâ; callo centrali crasso, lenticulari.*

THE WARDROBE ROTELLA. Shell depressed, variously painted with bands, stripes, and spots; whorls rather concave above; ventral callus thick, lenticular.

SOWERBY. Genera of Shells.

Rotella lineolata (var.) Lamarck.

Rotella rosea, Chemnitz?

Hab. East Indies.

The upper part of the whorls are a little convex, while those of *R. elegans* are quite flattened.



ROTELLA.

PLATE IV.

Species 13. (Mus. Brit.)

ROTELLA STRIOLATA. *Rot. testâ cinnamomeâ, fusco variegatâ, spiraliter striatâ, suprâ infrâque sub-aqualiter convexâ; callo centrali angusto, trilobato.*

THE STRIATED ROTELLA. Shell cinnamon variegated with brown, spirally striated, nearly equally convex above and below; ventral callus narrow, trilobate.

A. ADAMS. (*Ethalia*), Proc. Zool. Soc. 1853.

Hab. — ?

The callus is in three parts, one rounded above, one spread circularly over the umbilicus, and the third forming a thickened margin to the columella.

Species 14. (Mus. Brit.)

ROTELLA CANIDIA. *Rot. testâ parvâ, subglobosâ, levi, albâ, opacâ; callo centrali parvâ, rotundâ; columellâ latissimâ; aperturâ magnâ.*

THE WHITE ROTELLA. Shell small, rather globose, smooth, white, opaque; ventral callus small, round; columella rather broad; aperture large.

A. ADAMS. (*Ethalia*), Proc. Zool. Soc. 1862, p. 296.

Hab. Gotto Islands, Japan.

This minute species is less like a *Rotella* than other species of *Ethalia*.

Species 15. (Mus. Brit.)

ROTELLA PERSPECTA. *Rot. testâ minutâ, albâ, compressâ, lenticulari; aperturâ transversâ ovatâ; callo centrali semilunari.*

THE PERSPECTED ROTELLA. Shell minute, white, compressed, lenticular; aperture transversely ovate; ventral callus semilunar.

A. ADAMS. (*Ethalia*), Annals of Natural History, 1861.

Hab. China.

Very simple in form and character.

Species 16. (Mus. Brit.)

ROTELLA BRAZIERI. *Rot. testâ transversâ oratâ, depressâ, minutâ, albâ, semipellucidâ; callo centrali parvâ, rotundâ, ad columellam continuo; aperturâ magnâ.*

BRAZIER'S ROTELLA. Shell transversely ovate, depressed, minute, white, semipellucid; ventral callus small, rounded, continued at the columella; aperture large.

ANGUS. (*Ethalia*), Proc. Zool. Soc. 1877, p. 39, Pl. 5, f. 17.

Hab. Sow and Pigs Reef, Port Jackson, Australia.

Species 17. (Mus. Brit.)

ROTELLA POLITA. *Rot. testâ subglobosâ, albâ, politâ; spirâ conicâ, anfractibus paucis; callo centrali ferè obsoletâ.*

THE POLISHED ROTELLA. Shell subglobose, white, polished; spire conical, whorls few; ventral callus almost obsolete.

A. ADAMS. (*Ethalia*), Annals of Nat. Hist. 1862, p. 296.

Hab. Gotto, Japan.

Species 18. (Fig. a, b, Mus. Brit.)

ROTELLA GUAMENSIS. *Rot. testâ altissimâ, subglobosâ; varicâ pictâ, brevitatâ; anfractibus superne versis suturam tumidis; angulo centrali rotundâ, infrâ convexâ, callo reniformi, roseâ; columellâ latè callosâ.*

THE GUAM ROTELLA. Shell rather high, subglobose; variously painted, smooth; whorls above towards the suture tumid; central angle rounded, convex below, callus kidney-shaped, pinky; columella broadly callous.

QUoy. Voy. Astrolabe, Pl. 61, f. 32-33.

Hab. Isl. Guam. — Luxon; Philippines.

This is the type of the genus *Ethalia*, which, however little like *Rotella* in general form, has the same essential characters.

ROTELLA.—PLATE IV.

Species 19. (Fig. a, b, Mus. Brit.)

ROTELLA SOBRINA. *Rot. testâ minutâ, planorbulari, compressâ, albâ, opacâ; infâ umbilicatâ, anfractibus rotundis.*

THE RELATED ROTELLA. Shell minute, planorbular, compressed, white, opaque; umbilicated below, whorls rounded.

A. ADAMS. (*Ethalia*), Ann. of Nat. Hist. 1861, Vol. VIII. 306.

Species 20. (Mus. Brit.)

ROTELLA TRILOBATA. *Rot. testâ pallidè griseo-olivaceâ, subdepressâ, maculis strigisque variè pictâ; anfractibus supernè convexiusculis; umbilico infundi-*

buliformi; collo parvo in partes tres semicirculares diviso.

THE TRILOBATE ROTELLA. Shell pale grey-olive, subdepressed, variously painted with spots and stripes; whorls rather convex above; umbilicus funnel-shaped; callus small, divided into three semicircular parts.

SOWERBY.

Hab. —?

In this species, the form of the callus is very peculiar, resembling that of *R. striolata*, but more pronounced in character. In rotundity of whorls the species is midway between the latter and *R. Guamensis*.

MONOGRAPH
OF THE GENUS
STYLIFER.

Frank Nature, rather curious than in haste,
Hath well compos'd thee.—*Shakspeare*.



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STYLIFER.

PLATE I.

Genus **STYLIFER**. *Broderip*.

Testa tenuissima, plerumque pellucida aut semi-pellucida, leviss, polita, multispinalis, subulata vel subglobosa; apice obliquo, styliformi; labio externo sinuatim producta.

Shell very thin, generally pellucid or semi-pellucid, smooth, polished, multispinal, subulate or subglobose; apex oblique, styliform; outer lip sinuously produced.

The mollusca secreting these glassy little shells are parasitic on star-fishes and Echini, burrowing under the skin, and forming tumours which appear externally. One species is found among the spines of our common Echinus, and the first species described by Mr. Broderip infects a starfish of the shores of Galapagos islands.

Species 1. (Fig. a, b. Mus. Brit.)

STYLIFER TURTONI. *Sty. testâ subglobosâ, parvâ, spirâ acuminatâ, productâ, anfractibus superne angulatis, apicalibus minutis papillois, ultimo magno, subrectilaterali.*

TURTON'S STYLIFER. Shell subglobose, small, spire acuminated, produced, whorls angular above, apical minute papillose, last large, subrectilateral.

BRODERIP. Proc. Zool. Soc. 1832, p. 61.

Hab. On British Echini.

Species 2. (Mus. Brit.)

STYLIFER OVIDEA. *Sty. testâ subglobosâ, spirâ moderate productâ, anfractibus subrotundis, apicalibus minutissimis; aperturâ pyriformi, labio externo superne subcompressa, sinuatim producta.*

THE EGG-SHAPED STYLIFER. Shell subglobose, spire moderately produced, whorls rather round, apical very minute; aperture pyriform, outer lip slightly compressed above, sinuously produced.

A. ADAMS. Proc. Zool. Soc.

Hab. —

Species 3. (Mus. Brit.)

STYLIFER ASTERICOLA. *Sty. testâ orato-globosâ, spirâ brevî acuminatâ; anfractibus paucis, apicali minuto, aperturâ angustiusculâ, infri subaromatâ; labio externo superne sinuatim producta.*

THE STARFISH STYLIFER. Shell ovate-globose; spire short, acuminated, whorls few, apical minute; aperture rather narrow, slightly pointed below, outer lip sinuously produced above.

BRODERIP. Sowerby's Conchological Manual, f. 12-13
Stylifer Broderipii. Adams.

Hab. Galapagos.

Species 4. (Mus. — ?)

STYLIFER GUNTHERI. *Sty. testâ majusculâ, turratâ, pyramidalâ; apice producta, acuminata, anfractibus gradatis, superne angulatis, ultimo magno, globoso, inflato; sinu columellari retrorsum extenso.*

GUNTHER'S STYLIFER. Shell rather large, turreted pyramidal; apex produced, acuminated, whorls step-like, angular above; last large, globose, inflated; columellar sinus extended backwards.

ANGAS (Apicalia). Proc. Zool. Soc. 1877, Pl. V. f. 6.
Hab. New South Wales.

A singularly formed shell, partaking the characters of the globose and subulate sections

Species 5. (Mus. Brit.)

STYLIFER CUMINGIANA. *Sty. testâ pyramidalâ, spirâ altâ, acuminatâ; anfractibus numerosis, depressis, apicalibus trinis aut quaternis attenuatis, styliformibus, ultimo inflato, rotundo, aperturâ brevî, columellâ rectiusculâ.*

CUMING'S STYLIFER. Shell pyramidal, spire raised, acuminated; whorls numerous, depressed, three or four apical attenuated, styliform, last inflated, round, aperture short, columella rather straight.

ADAMS — ? MS. Cam. Coll.

Hab. — ?

STYLIFER.—PLATE I.

Species 6. (Mus. Brit.)

STYLIFER SOLIDA. *Sty. testâ subulatâ, solidiusculâ, opacâ; spirâ altissimâ, anfractibus numerosis, apicalibus parvis; apice tortuo; aperturâ breviusculâ, infrâ acuminatâ.*

THE SOLID STYLIFER. Shell subulate, rather solid, opaque; spire very high, whorls numerous, apical small; apex tortuous; aperture rather short, acuminated below.

A. ADAMS. MS. Cum. Coll.

Hab. — ?

Species 7. (Mus. Brit.)

STYLIFER BAIRDII. *Sty. testâ breviusculâ, spirâ acuminatâ, anfractibus ultimo et penultimo cylindricis, superne angulatis; aperturâ oblongâ, infrâ subexpansâ, columellâ crassiusculâ.*

BAIRD'S STYLIFER. Shell rather short, spire acuminated, last whorl and last but one cylindrical, angular above; aperture oblong, slightly expanded below; columella rather thick.

A. ADAMS. Proc. Zool. Soc. 1854, p. 137.

Hab. — ?

Species 8. (Mus. Brit.)

STYLIFER DUBIA. *Sty. testâ globosâ, spirâ productâ, pyramidatâ, acuminatâ, anfractibus apicalibus attenuatis, penultimo subinglato, ultimo valdè inflato, rotundo; aperturâ pyriformi, labio externo flexuoso.*

THE DOUBTFUL STYLIFER. Shell globose, spire produced, pyramidal, acuminated, apical whorls attenuated, last but one slightly inflated, last much inflated, rounded; aperture pyriform, outer lip flexuous.

BAIRD. MS. Brit. Mus.

Hab. New Caledonia.

Species 9. (Mus. Brit.)

STYLIFER JAPONICA. *Sty. testâ solidiusculâ, globosâ, brevi; spirâ productâ, attenuatâ, acuminatâ; ultimo anfractu globoso, aperturâ breviusculâ, infrâ acuminatâ, columellâ tortuâ, solidiusculâ.*

THE JAPAN STYLIFER. Shell rather solid, globose, short; spire produced, attenuated, acuminated, last whorl globose, aperture rather short, acuminated below; columella tortuous, rather solid.

A. ADAMS (Amanrella), MS. Brit. Mus.

Hab. — ?



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STYLIFER.

PLATE II.

Species 10. (Mus. — ?)

STYLIFER SPECIOSA. *Sty. testâ subulatâ hyalinâ, spirâ elevatâ, superne styliformi attenuatâ tortuâ; anfractibus inferioribus inflatis, subrectilateralibus; aperturâ brevi, columellâ rectiusculâ.*

THE SPECIOUS STYLIFER. Shell subulate, hyaline; spire elevated, styliform attenuated, tortuous above; lower whorls inflated, rather straight-sided; aperture short, columella rather straight.

A. ADAMS. Proc. Zool. Soc. 1868.

Hab. Mauritius.

Species 11. (Mus. Brit.)

STYLIFER ATTENUATA. *Sty. testâ angustè pyramidatâ, spirâ altissimâ, apice obliquè distorto, acutissimo; anfractibus numerosis, rectilateralibus, ultimo infrâ medium subangulatâ; aperturâ angustâ, infrâ acuminatâ.*

THE ATTENUATED STYLIFER. Shell narrowly pyramidal, spire very high, apex obliquely distorted, very sharp; whorls numerous, straight-sided, last rather angular below the middle; aperture narrow, acuminate below.

SOWERBY.

Hab. St. Thomas.

Species 12. (Mus. Brit.)

STYLIFER CORALLINA. *Sty. testâ pyramidatâ, angustâ, apice acuminatâ, obliquè subinclinatâ; anfractibus quaterdecenis ul suturam subangulatis, aperturâ parvâ, infrâ subangulatâ.*

THE CORALLINE STYLIFER. Shell pyramidal, rather narrow; apex acuminate, slightly inclined obliquely; whorls fourteen, slightly angular at the suture; aperture small, slightly angular below.

CHEMNITZ — :

Hab. — ?

Species 13. (Mus. Brit.)

STYLIFER SUBANGULATA. *Sty. testâ pyramidatâ, altissimâ; apice acuminatâ, lateraliter obliquè incli-*

nata; anfractibus quaterdecenis, apicalibus angustissimis, ultimo infrâ medium subangulatâ; aperturâ ovatâ, labio externo superne sinuatum producto.

THE SUBANGULAR STYLIFER. Shell pyramidal, very high, apex acuminate; laterally obliquely inclined; whorls fourteen, apical very narrow, last rather angular below the middle; aperture ovate, outer lip sinuously produced above.

A. ADAMS. Proc. Zool. Soc. 1855, p. 122.

Hab. — ?

Species 14. (Mus. Brit.)

STYLIFER EXARATA. *Sty. testâ solidiusculâ, altâ, attenuatâ, anfractibus altiusculis, convexis, obscurè, rugatis ultimo elevato; aperturâ subquadratâ, parvâ columellâ rectiusculâ.*

THE PLOUGHED STYLIFER. Shell rather solid, high, attenuated, whorls rather high, convex, obscurely wrinkled, last raised; aperture rather square, small; columella rather straight.

A. ADAMS — ?

Hab. — ?

Species 15. (Mus. Brit.)

STYLIFER THOMASIE. *Sty. testâ altissimâ, pyramidatâ, versus apicem subitò contractâ, attenuatâ; apice acuminatâ, rectiusculâ, anfractibus medianis altis, subcylindricis, ultimo obtusè angulatâ; aperturâ obliquè subquadratâ, columellâ rectiusculâ, infrâ acuminatâ.*

THE ST. THOMAS STYLIFER. Shell very high, pyramidal, contracted suddenly towards the apex, attenuated; apex acuminate, rather straight, middle whorls high, rather cylindrical, last obtusely angular; aperture obliquely subquadrate, columella rather straight, acuminate below.

SOWERBY.

Hab. Isl. St. Thomas.

Species 16. (Mus. Brit.)

STYLIFER FASTIGIATA. *Sty. testâ pyramidalî, ventriosâ, subperforatâ, altâ; spirâ acuminatâ, apice attenuatâ, obliquè inclinatâ; anfractibus numerosis, convexiusculis, ultimo magno, rotundo; aperturâ angustâ, columellâ tenui, infrâ acuminatâ.*

THE SHARP-POINTED STYLIFER. Shell pyramidal, ventricose, slightly perforated, high; spire acuminated, apex attenuated, obliquely bent; whorls numerous, rather convex, last large, round; aperture narrow, columella thin, acuminated below.

A. ADAMS — ? MS. Cam. Coll.

Hab. — ?

Species 17. (Mus. Brit.)

STYLIFER SUBULATA. *Sty. testâ tenuissimâ, pellucidâ, pyramidatâ, versis apicem subito in stylum contractâ et obliquè inclinatâ; anfractibus convexiusculis, ultimo magno, rotundo; aperturâ breviusculâ, labio externo suprà medium flexuosum producto.*

THE SUBULATE STYLIFER. Shell very thin, pellucid, pyramidal, suddenly contracted to a style towards the apex, and obliquely bent; whorls rather convex, last large, rounded; aperture rather short, outer lip flexuously produced above the middle.

BRODERIP. *Pro. Zool. Soc.* 1832, p. 61.

Hab. W. Indies.

Species 18. (Mus. Brit.)

STYLIFER EULIFORMIS. *Sty. testâ subopacâ, breviusculâ, spirâ pyramidatâ, apice attenuatâ, acuminatâ, obliquè distortâ; ultimo anfractu magno, rotundo, inflato; aperturâ brevî, pyriformi; columellâ crassiusculâ, labio externo flexuoso.*

THE BULB-SHAPED STYLIFER. Shell rather short, subopaque, spire pyramidal, apex attenuated, acuminated, obliquely distorted; last whorl large, round, inflated; aperture short, pyriform; columella rather thick, outer lip flexuous.

SOWERBY.

Hab. — Isl. St. Thomas.

Species 19. (Mus. Brit.)

STYLIFER GLABRATA. *Sty. testâ parvâ, albâ, politâ, ovato-oblongâ; aperturâ oblongâ longitudine spiram æquantî; spirâ paucispiralî; ultimo anfractu subovato, elongato; columellâ rectiusculâ.*

THE POLISHED STYLIFER. Shell small, white, polished, ovate-oblong; aperture oblong, equalling spire in length; spire with few whorls, last whorl subovate, elongated; columella rather straight.

A. ADAMS. (*Amaurella*) MS. Brit. Mus.

Hab. Japan.

Species 20. (Mus. Brit.)

STYLIFER SEMISTRIATA. *Sty. testâ parvâ, ovatâ, albâ, partim tenuissimè striatâ; spirâ quam aperturâ longiusculâ, anfractibus quaternis, ultimo ovato, oblongo; aperturâ ovatâ, breviusculâ.*

THE HALF-STRIATED STYLIFER. Shell small, ovate, white, partly very finely striated; spire rather longer than aperture; whorls four, last ovate, oblong; aperture ovate, rather short.

A. ADAMS. (*Amaurella*) MS. Brit. Mus.

Hab. Japan.

This and the previous species are of very doubtful generic attributes. Quite possibly they may be Stylifers, but on the other hand, they may belong to a different part of the system.

MONOGRAPH
OF THE GENUS
A U R I C U L A.

Nothing we see, but means our good,
As our delight, or as our treasure;
The whole is either our cupboard of food,
Or cabinet of pleasure.—*George Herbert.*



AURICULA.

PLATE I.

Genus AURICULA. *Lamarck.*

Testa oblonga, breviter spiralis, epidermide fusca induta; apertura elongata, margine infra integro, labio interno plicato et calloso; labio externo interdum interno, interdum ad marginem plicato; operculum nullum.

Shell oblong, briefly spiral, covered with a brown epidermis; aperture elongated, margin entire below, inner lip plaited and callous; outer lip sometimes plaited internally, sometimes at the margin; operculum none.

Including *Ellobium*, *Bolton*; *Cassidula*, *Fer.*; *Pleotrema*, *Adams*; *Alexia*, *Leach*; *Tralica*, *Gray*; *Maelampus*, *Mouff.*; *Marinula*, *King*.

The Auriculæ are found in salt-marshes, on mud-banks, among the roots of mangrove-trees, and at the mouths of rivers, principally in tropical countries, particularly those of the eastern hemisphere. China, Borneo, Malacca, the Philippines, and the more southern parts of Australia produce many of the species. A few are found in W. Columbia and the South Sea Islands. The West India Islands produce several well-known species. With regard to the various genera into which the different forms have been divided, it is probable that some of them may be usefully retained, but they are difficult to define, and require entire revision.

Species 1. (Fig. a, b, Mus. Sowerby.)

AURICULA MIDE. *Aur. testa magna, cylindrica, crassa, epidermide fusca induta; spirâ conica, brevi; anfractibus granosis sculptis; ultimo cylindrico, lavi, lateraliter unicaricoso, rudè supra infrâque*

granoso; apertura elongata, auriformi, medio contracto, labio interno longitudinaliter calloso, infra biplicato, labio externo crasso, latè planato, cum columellâ confluenti.

MIDAS' AURICULA. Shell large, cylindrical, thick, covered with a brown epidermis; spire conical, short; whorls sculptured in grains; last cylindrical, smooth, with a lateral varix, coarsely granular above and below. Aperture elongated, ear-shaped, contracted in the middle, inner lip longitudinally callous, with two plaits, outer lip thick, broadly flattened, confluent with columella.

LAMARCK. Nat. Hist. An. s. Vert.

Voluta auris Mide. Linnaeus.

Hab. Indian Seas.

Figures a and b represent two prevailing forms of this familiar shell.

Species 2. (Fig. a, b, Mus. Brit.)

AURICULA MALCHI. *Aur. testâ oblongo-subovata, epidermide fusca induta, longitudinaliter rugata; spirâ productâ, anfractibus supernè subangulatis, distanter nodosis, ad suturam marginatis et crenulatis; apertura breviusculâ, infra latiusculâ, columellâ biplicatâ; labio crasso, intus declivi.*

MALCHUS'S AURICULA. Shell oblong-subovate, covered with a brown epidermis, longitudinally wrinkled; spire produced, whorls somewhat angular above, distantly nodose, bordered and crenulated; aperture rather short, rather broad below; lip thick, sloped within.

MÜLLER. Chemn. Conch. Vol. IX. Pl. CXXI. f. 1637.

Hab. — ?



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AURICULA.

PLATE II.

Species 3. (Mus. Sowerby.)

AURICULA STAGNALIS. *Aur. testâ angustâ, elongatâ, tenui, epidermide pallidâ tenui indutâ; spirâ productâ, anfractibus quaternis, penultimo alto, convexo, superne granuloso, ultimo infri latiusculâ, columellâ triplicatâ, labio externo angusto, depresso.*

THE STILL-WATER AURICULA. Shell narrow, elongated, thin, covered with a pale, thin epidermis; spire produced, whorls four, last high, convex, granular above, last rather broad below, columella three-plaited, outer lip narrow, depressed.

D'ORBIGNY. Voy. Amér. Mérid. p. 325, Pl. XLIII. f. 7, 8.

Hab. S. America.

Species 4. (Mus. Brit.)

AURICULA GANGETICA. *Aur. testâ subcylindricâ, tenuiusculâ, epidermide stramineâ tenui indutâ; spirâ breviusculâ, anfractibus tumidis, subdepressis, ultimo supra aperturam elevato; aperturâ infri subexpansâ; columellâ bicipitatâ.*

THE GANGES AURICULA. Shell rather cylindrical, rather thin, covered with a thin straw-coloured epidermis; spire rather short, whorls tumid, slightly depressed, last raised above the aperture; aperture slightly expanded below; columella with two plaits.

BENSON. Ann. Mag. Nat. Hist.

Hab. Bombay.

Species 5. (Mus. Brit.)

AURICULA CEYLONICA. *Aur. testâ subcylindricâ, spirâ breviusculâ, infri subangulatâ, subpyramidatâ; ultimo anfractu superne latiusculâ, angulatâ; aperturâ elongatâ, angustiusculâ; columellâ bicipitatâ, labio externo superne angulatâ.*

THE CEYLON AURICULA. Shell subcylindrical, spire rather short, rather angular below, subpyramidal; last whorl rather broad above, angular; aperture elongated, rather narrow; columella with two plaits; outer lip angular above.

A. ADAMS. Proc. Zool. Soc. 1854, p. 10.

Hab. Ceylon.

Species 6. (Mus. Brit.)

AURICULA TORNATELLINIFORMIS. *Aur. testâ subcylindricâ, tenuiusculâ, epidermide tenui pallidâ indutâ; spirâ pyramidalâ, ultimo superne tumido, infri subgibbosâ; aperturâ breviusculâ, infri rotundâ, superne angulatâ; margine crassâ, planulatâ; columellâ bicipitatâ.*

THE TORNATELLA-LIKE AURICULA. Shell subcylindrical, rather thin, covered with a thin, pale epidermis; spire pyramidal, last tumid above, rather gibbous below; aperture rather short, rounded below, slightly angular above; margin thick, flattened; columella two-plaited.

PETIT. Proc. Zool. Soc. 1854, p. 7.

Hab. — ?

A peculiar roundness at the confluence of the two sides of the aperture suggests the form of tornatella.

Species 7. (Mus. Brit.)

AURICULA HELYCEA. *Aur. testâ tenui, pallidâ rubrâ; spirâ brevi, obtusâ, ultimo anfractu cylindricâ, superne tenuiter linatâ; aperturâ infri latiusculâ, columellâ triplicatâ, labio externo angusto, planulatâ.*

THE PALE RED AURICULA. Shell thin, pale red; spire short, obtuse, last whorl cylindrical, finely ridged above; aperture rather broad below, columella three-plaited, outer lip narrow, flattened.

PHILIPPI. Proc. Zool. Soc. 1854, p. 8.

Hab. Malacca.

Shaped something like *Auricula Judea*, but without the same solidity of substance and epidermis, and broadness of outer lip.

Species 8. (Mus. Brit.)

AURICULA SEMISULCATA. *Aur. testâ oblongâ, angustâ, pallidâ, cylindricâ; spirâ brevi, anfractibus superne densè sagittatis; aperturâ superne angustâ, infri latiusculâ, labio externo angusto, supra medium sinuatim contracto; pilicis columellaribus duabus, prominentibus.*

THE HALF-SCULPTURED AURICULA. Shell oblong, narrow, pale, cylindrical; spire short, whorls closely

AURICULA.—PLATE II.

shagreened above; aperture narrow above, rather broad below, outer lip narrow, sinuously contracted above the middle; columellar plaits two, prominent.

A. ADAMS. —?

Hab. Gambier's Island.

The sculpture on the upper part of the whorls is very beautiful, observed through a lens.

Species 9. (Mus. Brit.)

AURICULA DUNKER. *Aur. testâ cylindricâ, subpyramidalâ, pallidè rubescenti; spirâ productâ, angustâ, subauriculâ, breviusculâ, subpyriformi, margine latissimè planatâ, castaneâ, columellâ triplicitâ.*

DUNKER'S AURICULA. Shell cylindrical, rather pyramidal, pale reddish; spire produced, whorls rather turreted, rather convex, aperture rather short, rather pyriform, margin very broadly flattened, chestnut, columella with three plaits.

PFEIFFER. —?

Hab. —?

Species 10. (Mus. Brit.)

AURICULA PALESCENS. *Aur. testâ cylindricâ, tenui, pallidâ; spirâ acuminatâ, productâ; ultimo angustâ, superius angulatâ; aperturâ breviusculâ; columellâ infusâ bicipitatâ; labio externo superius angulato, medio et infusâ incrassato.*

THE PALE AURICULA. Shell cylindrical, thin, pale; spire acuminate, produced; last whorl angular above; aperture rather short; columella with

two plaits below, outside lip rather angular above, thickened at the middle and under.

PETIT. —? Proc. Zool. Soc. 1854, p. 10.

Hab. —?

Species 11. (Mus. Sowerby.)

AURICULA CHINENSIS. *Aur. testâ elongatâ, crassâ; epidermide levi, crassâ pallidè castaneâ indutâ; spirâ productâ, convexâ, obtusâ; aperturâ breviusculâ, columellâ crassâ, infusâ callosâ, plicis duabus validis munitâ; labio externo crasso, lato, supra medium tumido, suturam versus angulato et sinuato.*

THE CHINESE AURICULA. Shell elongated, thick; covered with a smooth, thick pale chestnut epidermis; spire produced, convex, obtuse; aperture rather short, columella thick, callous below, guarded with two strong plaits; outer lip thick, broad, tumid above the middle, angular and sinuated towards the suture.

PFEIFFER. Proc. Zool. 1854, p. 152.

Hab. Chinese Seas.

Species 12. (Mus. Sowerby.)

AURICULA SUBULA. *Aur. testâ elongatâ, angulatâ, olivaceâ, tenui; spirâ elongatâ, attenuatâ; aperturâ brevî, labio externo tenui, columellâ infusâ subarcuatâ, truncatâ.*

THE AUL AURICULA. Shell elongated, narrow, olive, thin; spire elongated, attenuated; aperture short, outer lip thin, columella rather arched below, truncated.

GUOY. Voy. Astro. Pl. XIII. f. 39, 40.

Hab. Cuba.



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AURICULA.

PLATE III.

Species 13. (Mus. Brit.)

AURICULA SACVATA. *Aur. testâ cylindricâ, angustâ, epidermide fuscâ, crassâ, leviter sulcatâ indutâ; spirâ productâ, anfractibus rectilateralibus, ultimo oblongo; infra tunicâ, subtruncatâ; aperturâ brevissimâ, angustâ; marginâ carnea, labio externo supra medium inflexo; columellâ infra crassâ, leviter bidentatâ, prope medium acutè unidentatâ.*

THE BAGGED AURICULA. Shell cylindrical, narrow, covered with a brown, thick, slightly grooved epidermis; spire produced, whorls straight-sided, last oblong, swelled, rather truncated below; aperture rather short, narrow; margin flesh-coloured, outer lip bent inwards above the middle; columella thick below, with two slight teeth and one sharp near the middle.

PRESTON. Proc. Zool Soc. 1834, p. 121.

Hab. Bay of Manilla.

Species 14. (Mus. Brit.)

AURICULA SEMIPlicATA. *Aur. testâ tenui, angustâ, albacâ; spirâ attenuatâ, elongatâ; anfractibus supra suturam arcuatim latis, ultimo medio et infra levigato; aperturâ brevissimâ, pyriformi, columellâ infra medium plicâ prominenti armatâ.*

THE HALF-FLATTED AURICULA. Shell thin, narrow, olive; spire attenuated, elongated; whorls arched above the suture, last smooth at the middle and below; aperture rather short, pyriform, columella armed with a prominent plait below the middle.

H. and A. ADAMS. MS. Brit. Mus.

Auricula sculpta. — ?

Hab. Sandwich Islands, &c.

Distinguished by curved plaits or ridges on the upper part of the whorls.

Species 15. (Mus. Brit.)

AURICULA ELONGATA. *Aur. testâ sulcisiformi, angustâ, nitenti; spirâ conicâ, subproductâ; aperturâ*

angustâ, labio externo tenui, labio interno arcuato, infra medium unidentatâ, ad terminum truncatâ.

THE ELONGATED AURICULA. Shell rather fusiform, narrow, smooth; spire conical, rather produced; aperture narrow, outer lip thin, inner lip arched, with a single tooth below the middle, truncated at the end.

PARREYS. — ? MS. Mus. Brit.

Hab. Mediterranean.

Species 16. (Fig. a, b, Mus. Sowerby.)

AURICULA JUDE. *Aur. testâ solidâ, oblongo-cylindricâ, epidermide fuscâ, densè liratâ indutâ; spirâ productâ, obtusâ; aperturâ elongatâ, supra medium subcontractâ; labio interno valido, medio et infra plicâ duabus munito; labio externo lato, planato, supra medium tunicâ, versus suturam angulatâ et sinuato.*

THE JEWESS'S AURICULA. Shell solid, oblong-cylindrical, covered with a brown, closely-ridged epidermis; spire produced, obtuse; aperture elongated, rather contracted above the middle; inner lip strong, guarded with two teeth above the middle and below; outer lip broad, flattened, swelled above the middle, sinuous and angular towards the suture.

LEWIS. (Voluta auris Judæ.)

Hab. India.

Species 17. (Mus. Brit.)

AURICULA INCRASSATA. *Aur. testâ crassâ, angustâ, spirâ attenuatâ, productâ, anfractibus; subangulatis, ultimo cylindrico; aperturâ auriformi, medio sinuato contracto, marginâ crassissimâ, columellâ bicipitatâ.*

THE THICKENED AURICULA. Shell thick, narrow, spire attenuated, produced; whorls slightly angular, last cylindrical; aperture auriform, sinuously contracted in the middle, margin very thick, columella with two plaits.

A. and H. ADAMS. MS. Brit. Mus.

Hab. — ?

AURICULA.—PLATE III.

Species 18. (Mus. Brit.)

AURICULA HOOGLYENSIS. *Aur. testâ tenuissimâ, stramineâ, supernè conicâ, infrâ subrotundâ; spirâ subpyramidatâ, anfractibus quaternis, rectilateralibus, ultimo cylindrico, supernè angulato; columellâ arcuatâ, infrâ medium bicipitatâ.*

THE HOOGLY AURICULA. Shell rather thin, straw-coloured, conical above, rather rounded; spire rather pyramidal, whorls four, straight-sided, last cylindrical, angular above; columella arched, with two plaits below the middle.

BLANFORD. — ? MS. Brit. Mus.

Hab. Hoogly, India.

Species 19. (Mus. Brit.)

AURICULA LUTEA. *Aur. testâ ovatâ, pallidè fuscâ fusco-fasciatâ; spirâ brevî, conicâ, ultimo anfractu subcylindrico; aperturâ angustâ, labio externo intus plicis numerosis munito; columellâ arcuatâ, triplicatâ.*

THE YELLOW AURICULA. Shell ovate, pale fawn banded with brown; spire short, conical, last whorl rather cylindrical; aperture narrow, outer lip provided with numerous plaits within; columella arched, with three plaits.

QUOY. Voy. Astro. Zoologie, Vol. II. p. 163.

Melampus pallescens. Sowerby.

Hab. — ?

Species 20. (Mus. Brit.)

AURICULA OPARICA. *Aur. testâ tenuî, angustâ, fusiformi, pallidè stramineâ; spirâ productâ, subacuminatâ, anfractibus elevatis, ultimo infrâ subtruncato; aperturâ brevî, columellâ arcuatâ, infrâ medium unipicatâ, ad terminum truncatâ.*

THE OPARA AURICULA. Shell thin, narrow, fusiform, pale straw; spire produced, rather acuminate; whorls raised, last slightly truncated below; aperture short, columella arched, with a plait below the middle, truncated at the end.

H. and A. ADAMS. — ? MS.

Hab. Opara Isl., S. Seas.

Species 21. (Mus. Brit.)

AURICULA FUSILLA. *Aur. testâ parvâ, angustâ, albâ, spirâ acuminatâ, ultimo anfractu supra aperturam elevatâ, versus terminum subattenuatâ; aperturâ parvâ, columellâ bicipitatâ.*

THE DWARF AURICULA. Shell small, narrow, white; spire acuminate, last whorl elevated above the aperture, slightly attenuated towards the end; aperture small, columella with two plaits.

H. and A. ADAMS. — ? MS. Brit. Mus.

Hab. Philippines.



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AURICULA.

PLATE IV.

Species 22. (Mus. Sowerby.)

AURICULA DOLIOLUM. *Aur. testâ parvâ, ovatâ, griseâ, fusco-fusciatâ; spiralliter tenuiter sulcatâ; spirâ fuscâ, brevi, mucronatâ; aperturâ elongatâ, intus castaneâ, columellâ infra medium prominenti, bicipitatâ; labio externo lato, albo, planulato, ad medium undulato.*

THE LITTLE TON AURICULA. Shell small, ovate, grey, banded with brown; spirally finely grooved; spire brown, short, mucronate; aperture lengthened, chestnut within; columella with two prominent plaits below the middle; outer lip broad, white, flattened, with a tooth at the middle.

PETIT. —? Proc. Zool. Soc. 1854, p. 31.

Hab. —?

Species 23. (Mus. Brit.)

AURICULA FRUMENTUM. *Aur. testâ fulvâ, subcylindricâ, solidâsculâ; spirâ brevi, ultimo anfractu oblong; labio interno latè expanso, tridentato, columellâ brevî, uniplicatâ, labio externo parvâ incrassato.*

THE CORN AURICULA. Shell fawn, rather cylindrical, rather solid; spire short, last whorl oblong; inner lip broadly spread, three-toothed, columella short, with one plait, outer lip a little thickened.

PETIT. —? Proc. Zool. Soc. 1854, p. 11.

Hab. Lima.

Species 24. (Mus. Brit.)

AURICULA AVENA. *Aur. testâ parvâ, angustâ, pallidè fulvâ, leviter fuscâ; spirâ productâ, acuminatâ; aperturâ superiè angustâ, labio interno infra medium triplicato, columellâ uniplicatâ, labio externo ad medium subsinuato.*

THE WHEAT AURICULA. Shell small, narrow, pale fulvous, slightly banded; spire produced, acuminate; aperture narrow above, inner lip three-plaited below the middle, columella single-plaited, outer lip rather sinuous at the middle.

PETIT. —? Proc. Zool. Soc. 1854, p. 34.

Hab. —?

Species 25. (Mus. Brit.)

AURICULA FELIS. *Aur. testâ fuscâ, levî, tenuissimè spiralliter striatâ; spirâ brevi, conicâ, ultimo*

anfractu infri obliquè attenuato, prope terminum spiralliter carinato; aperturâ subovatâ, margine inflexo; latè planulato; labio externo supra medium profundè sinuato, medio expanso, denticulato, labio interno bicipitato; columellâ plicâ bifidâ armatâ.

THE CAT'S AURICULA. Shell brown, smooth, very finely spirally striated; spire short, conical, last whorl obliquely attenuated below, spirally keeled near the end; aperture subovate, margin bent inwards, broadly flattened, outer lip with a deep sinus above the middle, expanded and crenulated at the middle; inner lip with two plaits; columella armed with a bifid plait.

LAMARCK. Anim. s. Vert.

Bulinus auris-felis. Brugnière.

Hab. W. Indies.

Species 26. (Mus. Brit.)

AURICULA NUCLEUS. *Aur. testâ ovatâ, intensè fuscâ, tenuiter spiralliter sulcatâ; spirâ brevi, anfractibus convexis, ultimo breviusculo, infri spiralliter carinatâ, angustâ, infra carinam concavâ, labio interno bicipitato, columellâ prominenti, uniplicato, labio externo coffeo, lato, planato, supra medium prominenter expanso.*

THE NUT AURICULA. Shell ovate, deep brown, finely spirally grooved; spire short, whorls convex; last rather short, spirally keeled below, narrow; concave below the keel; inner lip with two plaits; columella with a prominent plait, outer lip coffee-coloured, broad, flattened, prominently expanded above the middle.

Gmelin. Linn. Syst. Nat.

Cassidula Cunninghamiana. Adams.

Hab. Manilla.

Species 27. (Mus. Sowerby.)

AURICULA COFFEA. *Aur. testâ ovatâ, fusco latè fuscâ, tenuiter spiralliter striatâ; spirâ conicâ, brevi, ultimo anfractu angulato, infri angustâ, carinatâ; labio externo pallidè purpureo, supra medium prominenter lobato, columellâ bicipitatâ.*

THE COFFEE AURICULA. Shell ovate, broadly banded with brown, finely spirally striated; spire conical, short, last whorl angular, narrowed below,

AURICULA.—PLATE IV.

keeled; outer lip pale purple, prominently lobed above the middle, columella with two plaits.

CHEMNITZ. Conch. IX. t. 121, f. 5.

Hab. Mexico.

A shorter and more angular shell than *Auricula felis*.

Species 28. (Mus. Sowerby.)

AURICULA ANGULATA. *Aur. testâ conico-cylindricâ, griseo-fuscâ, ad angulum albo-fasciatâ; spirâ breviter conicâ, anfractibus acutè angulatis; labio externo pallidè carneo, plumato; margine interno supra medium prominenter expanso; labio interno supra columellam buplicato, infra expanso, concavo, plicâ duplicatâ armato.*

THE ANGULAR AURICULA. Shell conico-cylindrical, grey-brown, with a white band on the angle; spire shortly conical, whorls sharply angular; outer lip pale flesh, flattened; inner margin prominently expanded above the middle; inner lip with two folds above the columella, expanded below, concave, armed with a double plait.

PETIT. Proc. Zool. Soc. 1854, p. 31.

REEVE. Conch. Syst. Auricula, Pl. LXXXVII. f. 5.

Hab. —?

Species 29. (Mus. Sowerby.)

AURICULA DECUSSATA. *Aur. testâ griseo-fuscâ, spiraliter sulcatâ, sulcis decussatâ; spirâ productâ, sub-acuminatâ, ultimo anfractu superne rotundâ, infra carinatâ; aperturâ biangulatâ; labio interno buplicato; columellâ expansâ, uniplicatâ, labio externo superne angulatim sinuato, supra medium plicâ acutè angulatâ prominenti armato.*

THE DECUSSATED AURICULA. Shell grey-brown, spirally grooved, grooves decussated; spire produced,

slightly acuminated, last whorl rounded above, keeled below; aperture biangular; inner lip with two plaits; columella expanded, with a single plait, outer lip with an angular sinus above, armed above the middle with a sharply angular, prominent plait.

H. and A. ADAMS. —? MS. Brit. Mus.

Hab. —?

Species 30. (Mus. Brit.)

AURICULA GRANIFERA. *Aur. testâ griseâ, conicâ, liris tenuissimis, striis decussatis, graniferâ; aperturâ angustâ, utrinque dentatâ.*

THE GRANULAR AURICULA. Shell grey, conical, grained by very fine ridges crossed by striae; aperture narrow, toothed on each side.

MOUSSON. —? MS. Brit. Mus.

Hab. Near Cape Bedford.

Species 31. (Mus. Brit.)

AURICULA TURRITA. *Aur. testâ elongatâ, turratâ, longitudinaliter tenuissimè plicatâ, epidermide stramineâ indutâ; spirâ elongatâ, anfractibus elevatis, superne subangulatis, ad suturam crenulatis; aperturâ pyriformi; labio interno prominenter triplicato, labio externo latè incrassato.*

THE TURRETED AURICULA. Shell elongated, turreted, longitudinally very finely plaited, covered with a straw-coloured epidermis; spire elongated, whorls raised, rather angular above, crenulated at the suture; aperture pyriform, inner lip with three prominent plaits, outer lip broadly thickened.

PFEIFFER. Proc. Zool. Soc. 1854, p. 121.

Hab. Philippines.



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AURICULA.

PLATE V.

Species 32. (Mus. Sowerby.)

AURICULA KRAUSSII. *Aur. testâ fusco-fumosâ, lavi, supernè tenuiter sulcatâ, ovatâ, spirâ pyramidalâ; ultimo anfractu infri carinato; aperturâ angustâ, supernè sublepressâ, labio interno triplicato, labio externo lato, medio prominenter unidentato, supra medianâ angulatim sinuato.*

KRAUSS'S AURICULA. Shell smoky brown, smooth, finely grooved above, ovate, spire pyramidal; last whorl keeled below; aperture narrow, somewhat depressed above, inner lip with three plaits, columella with three plaits, outer lip broad, middle with a prominent tooth, angularly sinuous above the middle.

KÜSTER. Proc. Zool. Soc. 1854. p. 11.

Hab. — ?

Species 33. (Mus. Sowerby.)

AURICULA PEPITA. *Aur. testâ obliquè ovatâ, fuscâ; spirâ breviusculâ, anfractibus tribus, rapidè crescentibus, ultimo magno; aperturâ patulâ, latâ, antice obliquè productâ, columellâ rectiusculâ, dentibus duobus prominentibus albis armatâ.*

THE PIP AURICULA. Shell obliquely ovate, brown; spire rather short, whorls three, quickly increased, last large; aperture patulous, broad, anteriorly obliquely produced, columella rather straight, armed with two prominent white teeth.

KING. (Marinula). Zool. Journ. Vol. V. p. 344.

Auricula nigra. Philippi.

Hab. — ?

Species 34. (Mus. — ? Copied.)

AURICULA AUSTRALIS. *Aur. testâ ovatâ, pallidè olivaceâ, fusco longitudinaliter strigatâ, medio albounifasciatâ, infri spirâ carinatâ; spirâ productâ, obtusâ; aperturâ brevi ovatâ, columellâ bipliatâ, labio externo tenuiusculâ.*

THE AUSTRALIAN. Shell ovate, pale olive, longitudinally striped with brown, with a single white band in the middle, spirally keeled below; spire produced, obtuse; aperture short, oval, columella with two plaits, outer lip rather thin.

QUoy. Voy. Astr. Vol. II. p. 169. Pl. XIII. f. 34-38.

Hab. Australia.

Species 35. (Mus. Sowerby.)

AURICULA SULCULOSA. *Aur. testâ coffeâ, tenuissimè striatâ; spirâ breviusculâ, obtusâ, anfractibus rotundis; labio externo planulato, medio angulatim unidentato, supra medianâ sinuato, labio interno tenui, buplicato, columellâ latâ, concavâ, calidè unidentatâ.*

THE SULCATED AURICULA. Shell coffee-coloured, very finely striated; spire rather short, obtuse, whorls rounded; outer lip flattened, with angular tooth at the middle, sinuous above the middle, inner lip thin, two-plaited, columella broad, concave, with one strong tooth.

MOUSSON. Journ. Conch. Paris.

Hab. Port Natal.

Resembles *Auricula decussata*, less angular and with the folds of the outer lip much less produced.

Species 36. (Mus. Sowerby.)

AURICULA SANDWICHENSIS. *Aur. testâ intrinsecè fuscâ, medio albo cingulatâ, lavi, subcylindricâ, infri leviter carinatâ, spirâ pyramidalâ, aperturâ brevi, labio interno buplicato; columellâ inconspicuè uniplicatâ.*

THE SANDWICH ISLAND AURICULA. Shell deep brown, with a white band in the middle, smooth, subcylindrical, slightly keeled below, spire pyramidal, aperture short, inner lip with two plaits; columella with an inconspicuous plait.

EDEYOUS. — ? Proc. Zool. Soc. 1854. p. 34.

Auricula Browni. Philippi.

Hab. Sandwich Islands.

Species 37. (Mus. Brit.)

AURICULA BROTHIANA. *Aur. testâ basitâ, griseo pallidè fasciatâ, ovato-subglobosâ, utrinque acuminatâ; aperturâ angustâ, dentibus prominentibus acutis utrinque armatâ, columellâ infri triplicatâ.*

BROT'S AURICULA. Shell bay, banded with pale grey, oval-subglobose, acuminate at each end; aperture narrow, armed on both sides with sharp, prominent teeth, columella with one plait below.

PTEIFFER. — ? MS. Brit. Mus.

eylon.

AURICULA.—PLATE V.

Species 38. (Mus. Brit.)

AURICULA ZONATA. *Aur. testâ oblongâ, conicâ, luteâ, laevi, fusco-fasciatâ; spirâ pyramidalâ, breviusculâ, ultimo anfractu obtusè angulato; aperturâ elongatâ, columellâ biplicatâ, labio externo tenuiusculâ, intus maculato, transversè plicato.*

THE BANDED AURICULA. Shell oblong, conical, yellowish, smooth, banded with brown; spire pyramidal; rather short, last whorl obtusely angular; aperture elongated, columella with two plaits, outer lip rather thin, spotted inside, with transverse plaits.

MÜHLFELDT. — ? MS. Brit. Mus.

Auricula monile. Lamarck.

Auricula fasciata. Deshayes.

Voluta flava. Gmel.

Auricula mustellina. Deshayes.

Hab. West Indies.

Species 39. (Mus. Sowerby.)

AURICULA QUOYL. *Aur. testâ parvâ, fusco fasciatâ, ovatâ, superne acuminatâ; spirâ productâ, pyramidalâ; aperturâ breviusculâ; columellâ biplicatâ, labio externo tenui.*

QUOYL'S AURICULA. Shell small, banded with brown, ovate, acuminate above; spire produced, pyramidal; aperture rather short; columella with two plaits, outer lip thin.

A. ADAMS. (Laminodonta).

Hab. New Zealand.

Species 40. (Mus. Brit.)

AURICULA OBYZA. *Aur. testâ angustâ, fusiformi, laevi, albâ; spirâ elatâ, pyramidalâ; aperturâ parvâ, columellâ biplicatâ.*

THE RICE AURICULA. Shell narrow, fusiform, smooth, white; spire raised, pyramidal; aperture small, columella with two plaits.

H. & A. ADAMS — ? MS. Brit. Mus.

Hab. — ?

Species 41. (Mus. Brit.)

AURICULA NITIDULA. *Aur. testâ parvâ, nitentâ, castaneâ, fasciatâ, fusiformi, angustâ, spirâ elatâ, sub-acuminatâ, ultimo anfractu infra tumidiusculâ; aperturâ angustâ, labio externo tenui, labio interno biplicato, columellâ arcuatâ, infra truncatâ.*

THE NEAT LITTLE AURICULA. Shell small, shining, chestnut, banded, fusiform, narrow, spire raised, slightly acuminate, last whorl rather tumid below; aperture narrow, outer lip thin, inner lip with two plaits; columella arched, truncated below.

H. & A. ADAMS — ? MS. Brit. Mus.

Hab. — ?



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AURICULA.

PLATE VI.

Species 42. (Mus. Brit.)

AURICULA COSTELLARIS. *Aur. testâ aliterâ-fusâ, obliquè longitudinaliter costatâ, latâ, brevî; spirâ conicâ, ultimo anfractu breviter cylindrico, infâ rariâ, infâ carinâ umbilicatâ; aperturâ angustâ, labio interno arcuato, triplicatâ.*

THE SMALL RIBBED AURICULA. Shell olive-brown, obliquely longitudinally ribbed, broad, short; spire conical; last whorl shortly cylindrical, keeled below, umbilicated below the keel; aperture narrow, inner lip arched, with three plaits.

H. & A. ADAMS. MS. Brit. Mus.
Hab. New Zealand

Species 43. (Mus. Brit.)

AURICULA GLOBULUS. *Aur. testâ brevî, ovato-globosâ, utrinque acuminatâ, olivaceâ, fasciatâ; aperturâ angustissimâ, semilunari; columellâ biplicatâ, labio externo tenuissimâ.*

THE GLOBE AURICULA. Shell short, ovate-globose, acuminate at each end, olive, banded; aperture very narrow, semilunar; columella with two plaits, outer lip rather thin.

D'ORRIGNY—? MS. Brit. Mus.
Hab. S. America.

Species 44. (Mus. Brit.)

AURICULA STRIATA. *Aur. testâ purâ, conicâ, coffinâ, spirâ sulcatâ, superâ tenuiter longitudinaliter plicatâ; spirâ brevissimâ; anfractibus ad suturam crenulato-ristatis; ultimo infâ angustâ, truncatâ; aperturâ angustâ, labio interno tenui, inconspicuè plicatâ, columellâ validè uniplicatâ, labio externo incrassato, superâ angulatâ.*

THE STRIATED AURICULA. Shell small, conical, coffee-coloured, spirally grooved, finely longitudinally plaited above; spire very short; whorls with a crenulated crest at the suture; last narrow below, truncated; aperture narrow, inner lip thin, inconspicuously plaited, columella with a strong plait, outer lip thickened, angular above.

PEASE—? MS. Brit. Mus.
Hab. South Sea Islands.

Species 45. (Mus. Sowerby.)

AURICULA SULCATA. *Aur. testâ subcylindricâ, fuscâ, fasciâ, albo angustè trifasciatâ, superâ spirâ spirâ lincâ, infâ crebè sulcatâ; spirâ pyramidatâ, ultimo anfractu infâ obtusè carinato; aperturâ semiovatâ, labio interno biplicatâ, labio externo eggero, albo, subincrassato.*

THE GROOVED AURICULA. Shell rather cylindrical, deep brown, with three narrow white bands, spirally ridged above, closely grooved below; spire pyramidal, last whorl obtusely keeled below; aperture half-oval, inner lip with two plaits, outer lip reflected, white, rather thickened

H. & A. ADAMS. MS. Brit. Mus.
Auricula Stutchburgi. Pfeiffer.
Hab. New Zealand.

Species 46. (Mus. Brit.)

AURICULA CINGULATA. *Aur. testâ subcylindricâ, utrinque acuminatâ, angustâ, castaneo-fasciatâ, spirâ fusco-nigrescenti, elevatâ, laterâ laterâ convexâ; ultimo anfractu cylindrico; aperturâ, intâ dentatâ; labio columellari infâ sinuato, conspicuè uniplicatâ.*

THE Banded AURICULA. Shell subcylindrical, acuminate at each end, narrow, banded with chestnut, spire blackish brown, raised, rather convex laterally; last whorl cylindrical; aperture toothed within; columellar lip sinuous below, with a conspicuous plait.

PREIFFER. MS. Brit. Mus.
Melampus variabilis. Gassies.
Hab. Culra, New Caledonia.

Species 47. (Mus. Brit.)

AURICULA TABOGENSIS. *Aur. testâ conicâ, fuscâ, solidâ, ventricosâ, levî; spirâ breviter conicâ; ultimo anfractu infâ angustato, acuminato, columellâ validè biplicatâ, aperturâ angustâ, intâ transversè crebriplicatâ.*

THE TABOGIS AURICULA. Shell conical, brown, solid, ventricose, smooth; spire shortly conical; last whorl narrow below, acuminate, columella

AURICULA.—PLATE VI.

with two strong plaits, aperture narrow, closely transversely plaited within.

C. B. ADAMS. Zool. Proc. 1854, p. 9.

Hab. Jamaica.

Species 48. (Mus. Brit.)

AURICULA UMLASSIANA. *Aur. testâ conicâ, latissimâ, olivaceâ, pallidâ fusco-fusciatâ; spirâ brevissimâ, subplanulatâ, ultimo anfractu infâ angustissimâ; labio interno infâ uniplicato; columellâ uniplicatâ; labio externo intus multiplicato.*

THE UMLASSIAN AURICULA. Shell conical, very broad, olive, banded with pale brown; spire very short, rather flat, last whorl very narrow below; inner lip with one plait below, columella with one plait; outer lip numerous plaited within.

KRAUSS—? MS. Mus. Brit.

Hab. S. Africa.

Species 49. (Mus. Brit.)

AURICULA COSTATA. *Aur. testâ castaneâ, brevî, ovatâ, longitudinaliter costatâ, costis obliquis, undulatis, spirâ conicâ, anfractibus ad suturam cristatis; aperturâ semiovatâ, margine crassissimo, labio interno rectiusculo, margine quinque-plicato; labio externo supernè angulatim subsinuato.*

THE RIBBED AURICULA. Shell chestnut, short, ovate, longitudinally ribbed, ribs oblique, undulated, spire conical, whorls crested at the suture; aperture half-oval, margin very thick, inner lip rather straight; margin with five plaits; outer lip rather angularly sinuous above.

QUOY. Voy. Astrolabe. Proc. Zool. Soc. 1854.

Hab. Isl. Masbate, Philippines.

Species 50. (Mus. Brit.)

AURICULA GUNDLACHI. *Aur. testâ subconicâ, obtusè angulatâ, pallidâ, fasciis castaneis interruptis pictâ; spirâ brevissimâ, ultimo anfractu infâ subtruncato; aperturâ angustâ, intus multiplicatâ; labio interno biplicato.*

GUNDLACH'S AURICULA. Shell rather conical, obtusely angular, pale, painted with interrupted chestnut bands; spire very short, last whorl slightly truncated below; aperture narrow, numerous plaited within; inner lip with two plaits.

PFEIFFER. MS. Brit. Mus.

Hab. Cuba.

Species 51. (Mus. Brit.)

AURICULA OLIVACEA. *Aur. testâ convexo-conicâ, olivaceâ, griseo-fusciatâ, fasciis strigatis; spirâ brevissimâ, ultimo anfractu ventricoso, supernè angulatâ, infâ angustatâ; labio interno biplicato; labio externo intus multiplicato, ad marginem densè castaneo.*

THE OLIVE AURICULA. Shell convexly conical, olive, banded with grey, bands striped; spire very short, last whorl ventricose, angular above, narrow below; inner lip with two plaits; outer lip many-plaited within, deep chestnut at the margin.

CARPENTER. MS. Brit. Mus.

Hab. California.



AURICULA.

PLATE VII.

Species 52. (Mus. Brit.)

AURICULA REDFIELDI. *Aur. testâ purâ, conicâ, obtusè angulatâ, infâ obliquè subtruncatâ, albidâ, costâ interruptim fasciatâ; aperturâ angustissimâ, intûs seriatim plicatâ; labio interno uniplicato; columellâ uniplicatâ.*

REDFIELD'S AURICULA. Shell small, conical, obtusely angular, obliquely subtruncated in front, whitish, with interrupted chestnut bands; aperture very narrow, plaited in rows within, inner lip single-plaited, columella single-plaited.

PFEIFFER. MS. Brit. Mus.

Hab. Bermuda.

Species 53. (Mus. Brit.)

AURICULA CAFFERA. *Aur. testâ ovato-conicâ, olivaceo-fusâ, concolori vel fasciatâ; spirâ brevissimâ; ultimo anfractu ad suturam suberistato, infâ post columellam concavo; columellâ uniplicatâ; aperturâ intûs validè plicatâ.*

THE CAFFER AURICULA. Shell ovately-conical, olive-brown, uniform or banded; spire very short; last whorl somewhat crested at the suture, concave below, behind the columella; columella with one plait, aperture with strong plaits within.

KÜSTER. *Conch.* p. 36, Pl. V. f. 6.

Auricula ater. Mühlfeldt.

Hab. S. Africa.

Species 54. (Mus. Brit.)

AURICULA BIDENTA. *Aur. testâ ovato-conicâ, obtusâ, olivaceâ, interruptim pallidè trifasciatâ; spirâ brevî, conicâ, ultimo anfractu superne obtusè angulato, infâ acuminato; aperturâ angustâ, intûs edentulâ, labio interno bidentato.*

THE DOUBLE-TOOTHED AURICULA. Shell ovate-conical, obtuse, olive, with three pale interrupted bands; spire short, conical; last whorl obtusely angular above; acuminate below; aperture narrow, without teeth inside, inner lip with two teeth.

SAY. Invertebrata of Massachusetts.

Auricula cornea. Deshayes.

Hab. N. America.

Species 55. (Mus. Brit.)

AURICULA CRISTATA. *Aur. testâ subcylindricâ, pallidè castaneâ; spirâ brevissimâ, ultimo anfractu ad suturam elevatâ, tumidâ, infâ spirâli ter tumidâ; aperturâ angustâ, labio interno triplicato, infâ concavo, ad terminum subtruncato.*

THE CRESTED AURICULA. Shell rather cylindrical, pale chestnut; spire very short, last whorl raised at the suture, tumid, spirally tumid below; aperture narrow, inner lip with three plaits, concave below, rather truncated at the end.

PFEIFFER. MS. Brit. Mus.

Hab. Philippines.

Species 56. (Mus. Brit.)

AURICULA BOREALIS. *Aur. testâ conicâ, lorri, pallidè fulco fasciatâ; spirâ elevatâ, conicâ, ultimo anfractu obtusissimè angulatâ, prope terminum angustè carinato, labio interno prope medium uniplicato, columellâ infâ uniplicatâ; labio externo incrassato.*

THE BOREAL AURICULA. Shell conical, smooth, banded with pale brown; spire elevated, conical, last whorl very obtusely angular, narrowly keeled near the end, inner lip with a single plait near the middle, columella with a single plait below; outer lip thickened.

CONRAD. (Melampus.)

Hab. North America.

Species 57. (Mus. Sowerby.)

AURICULA CONIFORMIS. *Aur. testâ conicâ, luteâ, griseo-olivaceo latè fasciatâ; spirâ brevî, ultimo anfractu obtusè angulato, infâ acuminato, columellâ uniplicatâ; aperturâ intûs seriatim plicatâ, labio externo tenui, intûs fasciatâ.*

AURICULA.—PLATE VII.

THE CONE-SHAPED AURICULA. Shell conical, yellow, broadly banded with olive-grey; spire short, last whorl obtusely angular, acuminate below, columella with one fold; aperture with a row of teeth inside, outer lip thin, banded within.

LAMARCK. Anim. s. Vert.

Voluta minuta. Gmel.

Hab. Barbadoes.

Species 58. (Mus. Brit.)

AURICULA LIVIDA. *Aur. testâ obsâ, subconicâ, griseo-olivaceâ; spirâ brevissimâ, anfractibus maculatis, ultimo infri subtruncatâ, post columellam concavâ; aperturâ utrinque denticulatâ.*

THE LIVID AURICULA. Shell stout, rather conical, olive-grey, spire very short, whorls spotted, last subtruncated below, concave below the columella; aperture toothed on both sides.

LINNEUS. Syst. Nat.

Auricula Liberiana? Adams.

Hab. —?

Species 59. (Mus. Brit.)

AURICULA PANAMAENSIS. *Aur. testâ elongatâ, fusiformi, intensè fuscâ, levi, infri tumidioreâ; spirâ productâ, anfractibus quaternis, ultimo oblongo; aperturâ auriformi, infri subcavâ, medio contractâ; labio externo ad medium sinuato; labio interno quadruplicato, columellâ infri rectiusculâ.*

THE PANAMA AURICULA. Shell elongated, fusiform, deep brown, smooth, rather tumid below; spire produced, whorls four, last oblong; aperture auriform, rather expanded below, contracted in the middle; outer lip sinuous in the middle, inner lip with four plaits; columella rather straight.

C. B. ADAMS. Shells of Jamaica.

Hab. Jamaica.

Species 60. (Mus. Brit.)

AURICULA PYRIFORMIS. *Aur. testâ conicâ, subattenuatâ, spirâ brevi, subrotundâ, ultimo anfractu olivaceo pallidè maculatâ, infri attenuatâ, uncinatâ, columellâ conspicuè biphicatâ.*

THE PYRIFORM AURICULA. Shell conical, rather attenuated, spire short, rather rounded, last whorl

olive with pale spots, attenuated below, uncinated, with two conspicuous plaits.

PETIT. Proc. Zool. Soc. 1842, p. 202.

Hab. Tumaio, West Columbia.

Species 61. (Mus. Brit.)

AURICULA DENTICULATA. *Aur. testâ fulvâ, fusiformi; spirâ elongatâ, pyramidatâ, ultimo anfractu ventricosâ, ovato, labio columellari conspicuè triplicato, labio externo intus incrassato, obtusè bidentato.*

THE TOOTHED AURICULA. Shell fuscous, fusiform; spire elongated, pyramidal, last whorl ventricose, ovate; columellar lip conspicuously three-plaited, outer lip thickened within, with two conspicuous teeth.

D'ORBIGNY. Voy. Amér. Mérid. Pl. XLII. f. 4, 5.

Hab. Bermuda.

Species 62. (Mus. Brit.)

AURICULA SIAMENSIS. *Aur. testâ obtusè conicâ, castaneo quadrijasciatâ; spirâ breviusculâ, ultimo anfractu superiè obtusè angulatâ, infri subtruncatâ; aperturâ intus fasciatâ, columellâ conspicuè biphicatâ; labio externo incrassato.*

THE SIAMESE AURICULA. Shell obtusely conical, with four chestnut bands; spire rather short; last whorl obtusely angular above, slightly truncated below; aperture banded within; columella conspicuously two-plaited; outer lip thickened.

MARTENS. MS. Brit. Mus.

Hab. Siam.

Species 63. (Mus. Brit.)

AURICULA MITRALIS. *Aur. testâ olivaceiformi, angustâ, levi; spirâ elevatâ, obtusâ, convexiusculâ; ultimo anfractu cylindrico, pallidè fuscâ, superiè maculatâ; aperturâ pyriformi, infri rotundâ, columellâ brevi, rectâ, uniplicatâ.*

THE MIRE-LIKE AURICULA. Shell olive-shaped, narrow, smooth; spire raised, obtuse, rather convex, last whorl cylindrical, pale brown, spotted above; aperture pyriform, round below; columella short, straight, with one plait.

ADAMS. MS. Brit. Mus.

Hab. Mogadore.

AURICULA.

	Species.		Plate.	Species.
angulata, <i>Petit</i>	IV. 28	lutea, <i>Quoy</i>	III. 19	
ater, <i>Mühlfeldt</i>	VII. 53	malchi, <i>Müller</i>	I. 2	
Australis, <i>Quoy</i>	V. 34	Mide, <i>Linnaeus</i>	I. 1	
avena, <i>Petit</i>	IV. 24	minuta, <i>Gmelin</i>	VII. 57	
bidentata, <i>Sag</i>	VII. 54	mitralis, <i>Adams</i>	VII. 63	
borealis, <i>Conrad</i>	VII. 56	negra, <i>Philippi</i>	V. 43	
Bonoi, <i>Philippi</i>	V. 36	nitidula, <i>H. & A. Adams</i>	V. 14	
Brotiana, <i>Pfeiffer</i>	V. 37	nucleus, <i>Gmelin</i>	IV. 26	
Caltra, <i>Körster</i>	VII. 53	olivacea, <i>Carpenter</i>	VI. 51	
Ceylonica, <i>A. Adams</i>	II. 5	oparica, <i>Adams</i>	III. 29	
Chinensis, <i>Pfeiffer</i>	II. 11	oryza, <i>A. Adams</i>	V. 46	
cingulata, <i>Pfeiffer</i>	VI. 46	pallidescens, <i>Petit</i>	II. 16	
collea, <i>Chenault</i>	IV. 27	Panamaensis, <i>C. B. Adams</i>	VII. 59	
coniformis, <i>Lamarck</i>	VII. 57	pellucens, <i>Sowerby</i>	III. 19	
cornuta, <i>Deshayes</i>	VII. 51	perpita, <i>Kögel</i>	V. 23	
costata, <i>Quoy</i>	VI. 49	pusilla, <i>Adams</i>	III. 21	
costellaris, <i>H. & A. Adams</i>	VI. 42	pyriformis, <i>Petit</i>	VII. 60	
crustata, <i>Pfeiffer</i>	VII. 55	granifera, <i>Monsson</i>	IV. 39	
Cumingiana ? <i>Adams</i>	IV. 26	Redfieldi, <i>Pfeiffer</i>	VII. 52	
decussata, <i>Adams</i>	IV. 29	saccata, <i>Pfeiffer</i>	III. 13	
denticulata, <i>D'Orbigny</i>	VII. 61	Sandwichensis, <i>Edyout</i>	V. 36	
doliolum, <i>Petit</i>	IV. 22	sculpta — ?.....	III. 64	
Dunkeri, <i>Pfeiffer</i>	II. 9	semiplicata, <i>H. & A. Adams</i>	III. 14	
elongata, <i>Parceps</i>	III. 15	semisculpta, <i>A. Adams</i>	II. 8	
felis, <i>Lamarck</i>	IV. 25	Siamensis, <i>Marleus</i>	VII. 62	
frumentum, <i>Petit</i>	IV. 23	stagnalis, <i>D'Orbigny</i>	II. 3	
Gangetica, <i>Benson</i>	II. 4	striata, <i>Pearce</i>	VI. 11	
globulus, <i>D'Orbigny</i>	VI. 43	subula, <i>Quoy</i>	II. 12	
Gmelinki, <i>Pearce</i>	VI. 50	sulcata, <i>H. & A. Adams</i>	VI. 15	
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Hooglyensis, <i>Blanford</i>	III. 18	tornatelliniiformis, <i>Petit</i>	II. 5	
incrassata, <i>Adams</i>	III. 17	turrita, <i>Pfeiffer</i>	IV. 31	
Jude, <i>Linnaeus</i>	III. 16	Umlassiana, <i>Krauss</i>	VI. 18	
Kraussii, <i>Körster</i>	V. 32	variabilis, <i>Gassies</i>	VI. 19	
Liberiana, <i>Adams</i>	VII. 58	zonata, <i>Mühlfeldt</i>	V. 3	
livida, <i>Linnaeus</i>	VII. 58			



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SHOWING IN WHICH VOLUME EACH GENUS WILL BE FOUND.

The Genera marked * are Land Shells, those marked † are Freshwater, the remainder are Marine.

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*ADAMINELLA . . .	2 14	CARINARIA . . .	1 15	CYPRINA . . .	1 19	†HYRIA . . .	5 17
ADIDORIS . . .	2 19	CASSIDARIA . . .	1 5	†CYPRINA . . .	19 20	IANETHINA . . .	5 11
AKERA . . .	1 16	CASSIS . . .	12 5	CYTHURETA . . .	10 14	†I . . .	3 12
*ALYCIUS . . .	6 20	†CASTALIA . . .	3 17	DELPHEINULA . . .	5 1	†IRIDINA . . .	2 16
AMPHIDESMA . . .	7 8	CEMORIA . . .	1 19	DENTALIUM . . .	7 18	ISOCARDIA . . .	1 2
†AMPTILLARIA . . .	28 10	†CERITHIIDA . . .	4 15	DIONE . . .	12 14	KUPHUS . . .	1 20
*ANASTOMA . . .	1 14	CERITHIUM . . .	20 15	DOLABELLA . . .	2 16	LEDA . . .	9 18
ANATINA . . .	4 14	CHAMA . . .	9 4	DOLABRIFERA . . .	1 16	†LAMPAZIA . . .	2 15
ANATINELLA . . .	1 19	CHAMOSTREA . . .	1 14	DOLICH . . .	8 5	LAVIA . . .	1 9
ANCILLARIA . . .	12 15	†CHILINA . . .	3 19	DONAX . . .	9 8	LEOSTRACA . . .	3 15
†ANCLYTUS . . .	6 12	CHITON . . .	33 1	EBURNA . . .	1 5	*LEPTOPOMA . . .	8 13
†ANCYLUS . . .	33 20	CHITONELLUS . . .	1 1	EGLISIA . . .	1 5	LEMA . . .	5 18
†ANODON . . .	37 17	*CHONDROPOMA . . .	11 14	EMARGINULA . . .	9 19	†LIMNÆA . . .	15 18
ANOMIA . . .	8 11	CIRCE . . .	10 14	ERATO . . .	3 15	LINCOLIA . . .	2 13
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APLYSIA . . .	10 17	CLAVAGELLA . . .	3 18	ECLIMA . . .	6 15	LEUCOGOMUS . . .	5 10
ARCA . . .	17 2	COLUMBELL . . .	37 11	FASCIOLARIA . . .	7 4	LITORINA . . .	18 10
ARGONAUTA . . .	4 12	COSCHOLETUS . . .	2 14	FICULA . . .	1 4	LEUCIA . . .	11 6
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ASPERGILLUM . . .	4 12	CORRIS . . .	1 18	FISTULANA . . .	1 20	MYCRA . . .	21 8
ASTARTE . . .	3 19	CORVELLA . . .	5 2	FUSCA . . .	21 1	MAGLUS . . .	1 8
AVES . . .	5 17	CRANIA . . .	1 12	†GALATHEA . . .	6 16	MAFFIA . . .	3 11
†AUCICULA . . .	7 20	CRANOPUS AND ZEIDORA . . .	1 19	GALFOMMA . . .	1 19	MANGELLA . . .	8 3
†AVICULA . . .	18 10	CRASSATELLA . . .	3 1	GASTROCELENA . . .	4 20	MARGARITA . . .	3 20
†BARTELETTIA AND MELICIA . . .	1 18	CRINATELLA . . .	2 11	GENA . . .	2 19	MARGINELLA . . .	27 15
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BELLIA . . .	1 3	CUMINGIA . . .	2 19	HALIOTIS . . .	17 3	MEROE . . .	3 14
BELLINA . . .	1 18	*CYCLOPHORUS . . .	20 13	HAMINEA . . .	5 16	MELANIA AND EGLISIA . . .	1 5
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PANDORA . . .	3 19	*PUPURA . . .	13 3	STYLIPER . . .	2 20	*VITHINA . . .	10 13
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PATELLA . . .	42 8	PYRULA . . .	9 4	TEINOSTOMA . . .	1 19	YOLIDA . . .	5 18
PECEX . . .	35 8	RASELLA . . .	8 2	*TITICOSTOM . . .	1 15	ZEPHORA . . .	1 19
PETUNCULUS . . .	9 1	RICINTELLA . . .	6 3	TELLINA . . .	58 17	ZEPHYRINUS . . .	8 14
PETRICULARIA . . .	1 20	RINGIA . . .	1 19	TEREBRA . . .	27 12	ZYLOPHAGA AND	
PERCUM . . .	1 14	Rissoa . . .	13 20	TEREBULUM . . .	1 14	NAVEA . . .	1 20
PERNA . . .	6 11						





